

Appendix

WEIGHT DATA

The following Tables A-1 through A-3 and Figures A-1 through A-15 present a weight breakdown and structural comparison for different types of bomber, cargo, and fighter aircraft. This data was compiled for use in advance launch studies.

Table A-1. BOMBER AIRCRAFT

| | WING WEIGHT POUNDS | TAIL WEIGHT POUNDS | FUSELAGE LANDING | | SURFACE CONTROL WT. POUNDS | NACELLE WEIGHT POUNDS | PROPULSION WEIGHT POUNDS | ENGINE WEIGHT POUNDS | FUEL SYS- TEM WEIGHT POUNDS | INST. & NAVIG. EQUIP. WT. POUNDS |
|-------|--------------------------|--------------------------|------------------|--------------------|----------------------------------|-----------------------------|--------------------------------|----------------------------|-----------------------------------|---|
| | | | WEIGHT POUNDS | GEAR WT. POUNDS | | | | | | |
| B-17G | 6006 | 912 | 3635 | 2854 | 572 | 2259 | 15853 | 5289 | 3602 | 268 |
| B-24J | 6612 | 906 | 3317 | 2918 | 630 | 1570 | 14697 | 6050 | 2416 | 155 |
| B-25J | 2952 | 511 | 1955 | 1837 | 423 | 914 | 7046 | 3933 | 1259 | 102 |
| B-26C | 3865 | 566 | 1844 | 1878 | 305 | 1334 | 7594 | 4579 | 959 | 102 |
| B-29A | 14547 | 1487 | 7561 | 7506 | 836 | 4174 | 28758 | 10843 | 4382 | 335 |
| B-32 | 12226 | 1664 | 4796 | 6044 | 849 | 3160 | 21856 | 10428 | 3035 | 287 |
| B-36H | 39355 | 4796 | 17781 | 16229 | 1399 | 7597 | 67332 | 34900 | 4621 | 1121 |
| B-45C | 9747 | 1784 | 5152 | 5157 | 1001 | 2999 | 1939 | 10359 | 4485 | 205 |
| B-47E | 16508 | 2498 | 12609 | 7981 | 1995 | 3901 | 21734 | 15521 | 4784 | 497 |
| B-50A | 14638 | 1968 | 7962 | 6580 | 948 | 5760 | 27401 | 13632 | 5131 | 386 |
| B-52G | 37369 | 6030 | 26731 | 12992 | 2591 | 5936 | 36554 | 29756 | 5038 | 866 |
| B-57C | 6728 | 1115 | 4703 | 2130 | 665 | 658 | 7151 | 5350 | 1260 | 194 |
| B-58A | 11835 | 1239 | 4994 | 3650 | 1384 | 4795 | 15759 | 13776 | 1071 | 288 |
| B-66B | 8761 | 1896 | 6412 | 2804 | 1432 | 1647 | 10942 | 8324 | 2148 | 263 |
| B-70 | 25494 | 4490 | 56940 | 16593 | 7700 | 1328 | 45576 | 30570 | 4808 | 1328 |

Table A-1. BOMBER AIRCRAFT (Cont'd)

| | HYDRAULIC & PNEUMATIC WEIGHT POUNDS | ELECTRICAL WEIGHT POUNDS | ELECTRONIC WEIGHT POUNDS | ARMAMENT WEIGHT POUNDS | FURNISHINGS & EQUIPMENT WEIGHT POUNDS | AIR COND. & ANTI-ICING WEIGHT POUNDS | FIXED EQUIPMENT WEIGHT POUNDS | WEIGHT EMPTY POUNDS | WEIGHT EMPTY- FIXED EQUIP. POUNDS |
|-------|--|--------------------------------|--------------------------------|------------------------------|--|---|--|---------------------------|--|
| B-17G | 152 | 1244 | 631 | 2929 | 998 | 299 | 6369 | 35845 | 29476 |
| B-24J | 455 | 1100 | 551 | 3105 | 1406 | 211 | 7102 | 36219 | 29117 |
| B-25J | 186 | 515 | 448 | 2091 | 386 | 75 | 3445 | 19628 | 15683 |
| B-26C | 144 | 498 | 379 | 3025 | 537 | 367 | 4861 | 22247 | 17386 |
| B-29A | 230 | 2130 | 755 | 4301 | 1848 | 281 | 9837 | 70194 | 60357 |
| B-32 | 379 | 1169 | 567 | 4563 | 1934 | 600 | 9956 | 60235 | 50279 |
| B-36H | 185 | 2584 | 1055 | 10834 | 4010 | 1345 | 21134 | 168457 | 147323 |
| B-45C | 329 | 1011 | 1469 | 1836 | 1755 | 115 | 6720 | 48700 | 41980 |
| B-47E | 368 | 3687 | 4926 | 1480 | 1290 | 1303 | 14519 | 81745 | 67226 |
| B-50A | 343 | 2344 | 1499 | 4243 | 2476 | 1111 | 12124 | 77653 | 65529 |
| B-52 | 1915 | 6047 | 7957 | 4333 | 2120 | 670 | 24432 | 152293 | 127861 |
| B-57C | 226 | 1090 | 1093 | 519 | 519 | 178 | 3322 | 27059 | 23737 |
| B-58 | 517 | 1387 | 3784 | 757 | 658 | 927 | 8407 | 52044 | 43637 |
| B-66B | 774 | 1354 | 3420 | 866 | 907 | 1006 | 8824 | 42718 | 33894 |
| B-70 | 8574 | 1609 | 1248 | 11790 | 3561 | 3063 | 31723 | 189844 | 158121 |

Table A-1. BOMBER AIRCRAFT (Cont'd)

| | CREW WEIGHT POUNDS | FUEL WEIGHT POUNDS | OIL WEIGHT POUNDS | GUNS WEIGHT POUNDS | AMMO WEIGHT POUNDS | BOMB OR STORE * WEIGHT POUNDS | EQUIPMENT WEIGHT POUNDS | USEFUL LOAD WEIGHT POUNDS | NORMAL GROSS WEIGHT POUNDS |
|--------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|--|-------------------------------|------------------------------------|-------------------------------------|
| B-17G | 1200 | 4710 | 562 | 875 | 1368 | 4166 | 36 | 12881 | 48726 |
| B-24J | 1800 | 13013 | 904 | 783 | 1170 | 2000 | 125 | 19781 | 56000 |
| B-25J | 1200 | 2620 | 495 | 562 | 480 | 2133 | 48 | 7541 | 27169 |
| B-26C | 600 | 2669 | 405 | 372 | 428 | 1200 | 34 | 5713 | 27960 |
| B-29A | 1200 | 21083 | 2045 | 912 | 3300 | 20764 | 478 | 49806 | 120000 |
| B-32 | 1600 | 31626 | 2199 | 625 | 1629 | 2042 | 43 | 39765 | 100000 |
| B-36H | 3150 | 162906 | 4650 | 1803 | 5796 | 10000 | 754 | 189043 | 357500 |
| B-45C | 1000 | 30942 | 265 | 520 | 360 | 8830 | 368 | 45573 | 94273 |
| B-47E | 690 | 21953 | 150 | 228 | 620 | 18000* | 185 | 43255 | 125000 |
| B-50A | 2750 | 31680 | 2201 | 988 | 1914 | 2111 | 478 | 42347 | 120000 |
| B-52G | 1620 | 303815 | 663 | 272 | 720 | 17700 | 1147 | 335707 | 488000 |
| B-57C | 496 | 14787 | 45 | 766 | 580 | 5260 | 250 | 22183 | 49242 |
| YB-58A | 690 | 46105 | 230 | 248 | 406 | | 225 | 47956 | 100000 |
| B-66B | 720 | 23169 | 113 | 270 | 625 | 10024 | 361 | 35282 | 78000 |
| B-70 | 1072 | 306011 | 510 | | | 10000* | 3988 | 347265 | 537109 |

Table A-1. BOMBER AIRCRAFT (Cont'd)

| | W S | WING GROSS AREA SQ.FT. | WING SPAN FEET | WING STRUCTURAL SPAN FEET | WING AR | TIP CHORD THICKNESS INCHES | TIP CHORD LENGTH INCHES | TIP CHORD THICKNESS % CHORD PERCENT | ROOT CHORD THICKNESS INCHES |
|--------|--------|---------------------------------|----------------------|------------------------------------|------------|-------------------------------------|----------------------------------|--|--------------------------------------|
| B-17G | 34.1 | 1430 | 103.75 | 103.75 | 7.6 | 10.67 | 106.7 | 10.0 | 41.04 |
| B-24J | 53.4 | 1048 | 110.0 | 110.0 | 11.5 | 7.4 | 62.4 | 11.86 | 37.0 |
| B-25J | 44.5 | 610 | 67.7 | 67.7 | 7.5 | 8.70 | 64.3 | 13.53 | 26.32 |
| B-26C | 51.8 | 540 | 70.0 | 70.0 | 6.75 | 8.70 | 58.0 | 15.0 | 19.20 |
| B-29A | 69.0 | 1739 | 141 | 141.0 | 11.5 | 8.01 | 89.0 | 9.0 | 44.88 |
| B-32 | 70.3 | 1422 | 135. | 135.3 | 13.81 | 5.70 | 62.4 | 9.13 | 43.95 |
| B-36H | 75.0 | 4772 | 230 | 230.0 | 11.08 | 17.0 | 100 | 17.0 | 88.0 |
| B-45C | 80.0 | 1177 | 89 | 89.0 | 6.73 | 11.2 | 93 | 12.0 | 33.7 |
| B-47E | 87.5 | 1428 | 116 | 141.6 | 9.43 | 10.5 | 87.4 | 12.0 | 25.0 |
| B-50A | 67.8 | 1769 | 141.23 | 141.23 | 11.5 | 8.01 | 89.0 | 9.0 | 44.88 |
| B-52G | 122.0 | 4000 | 185.0 | 225.85 | 8.55 | 11.8 | 148.0 | 7.8 | 59.7 |
| B-57C | 51.3 | 960 | 64.26 | 64.26 | 4.27 | 7.2 | 80.0 | 9.0 | 27.4 |
| YB-58A | 64.8 | 1543 | 56.86 | 56.86 | 2.1 | 0 | 0 | 0 | 22.17 |
| B-66B | 100.0 | 780 | 72.5 | 89.5 | 6.75 | 5.4 | 64.9 | 8.3 | 19.40 |
| B-70 | 85.3 | 6298 | 105.0 | 105.0 | 1.75 | 0 | 0 | 0 | 23.46 |

Table A-1. BOMBER AIRCRAFT (Cont'd)

| | ROOT CHORD LENGTH INCHES | ROOT CHORD THICKNESS % CHORD PERCENT | WING TAPER RATIO | WING SWEEP C/4 | $f(\lambda)$ | $\cos \lambda$ | $\lambda_T = \frac{\frac{t}{c} T}{\frac{t}{c} R}$ | TOTAL TAIL AREA SQ. FT. | VERTICAL TAIL AREA SQ. FT. |
|--------|-----------------------------------|---|------------------------|----------------------|--------------|----------------|---|----------------------------------|-------------------------------------|
| B-17G | 288.0 | 14.25 | 0.370 | 0 | .424 | 1.0000 | .702 | 440 | 166 |
| B-24 | 168.0 | 22.02 | 0.371 | 0 | .424 | 1.0000 | .539 | 390 | 188 |
| B-25 | 154.8 | 17.00 | 0.415 | 0 | .428 | 1.0000 | .796 | 223 | 95 |
| B-26 | 128.0 | 15.00 | 0.453 | 0 | .431 | 1.0000 | 1.000 | 182 | 63 |
| B-29A | 212.0 | 22.00 | 0.420 | 0 | .428 | 1.0000 | .409 | 571 | 238 |
| B-32 | 192.0 | 22.89 | 0.325 | 3.5 | .420 | .99905 | .399 | 620 | 287 |
| B-36H | 400.0 | 22.0 | 0.250 | 0 | .412 | 1.0000 | .773 | 1519 | 597 |
| B-45C | 224.7 | 15.00 | 0.414 | 0 | .428 | 1.0000 | .800 | 387 | 142 |
| B-47E | 208.0 | 12.00 | 0.420 | 35 | .428 | .81915 | 1.000 | 498 | 230 |
| B-50A | 204.0 | 22.00 | 0.436 | 0 | .429 | 1.0000 | .409 | 639 | 286 |
| B-52G | 371.0 | 16.10 | 0.399 | 35 | .426 | .81915 | .484 | 1303 | 403 |
| B-57C | 228.0 | 12.00 | 0.351 | 5.2 | .422 | .99588 | .750 | 256 | 63 |
| YB-58A | 651.1 | 3.40 | 0 | 0 | .379 | 1.0000 | 0 | 160.0 | 160 |
| B-66B | 193.6 | 10.00 | 0.335 | 35.9 | .421 | .81004 | .830 | 303 | 176 |
| B-70 | 1413.6 | 1.66 | 0 | DELTA | .379 | 1.0000 | 0 | 556 | 234 |

Table A-1. BOMBER AIRCRAFT (Cont'd)

| | HORIZONTAL TAIL AREA SQ. FT. | AIRCRAFT LENGTH FEET | FUSELAGE LENGTH FEET | FUSELAGE DEPTH FEET | FUSELAGE WIDTH FEET | FUSELAGE WETTED AREA SQ. FT. | AMMO WEIGHT POUNDS | *MISSILE OR BOMB WEIGHT POUNDS | STORE WEIGHT POUNDS |
|--------|---------------------------------------|----------------------------|----------------------------|---------------------------|---------------------------|---------------------------------------|--------------------------|---|---------------------------|
| B-17G | 274 | 74.7 | 74.7 | 8.6 | 7.5 | 1410 | 1368 | 4166 | |
| B-24J | 202 | 58.8 | 58.8 | 10.42 | 7.42 | 1560 | 1170 | 7774 | |
| B-25J | 128 | 52.9 | 52.9 | 7.5 | 4.67 | 815 | 420 | 2132 | |
| B-26 | 119 | 51.19 | 51.19 | 5.8 | 5.17 | 1010 | 372 | 1200 | |
| B-29A | 333 | 99.0 | 99.0 | 9.5 | 9.5 | 2316 | 3300 | 2000 | |
| B-32 | 333 | 82.1 | 82.1 | 9.5 | 9.5 | 1870 | 1629 | 2076 | |
| B-36H | 922 | 162.1 | 162.1 | 12.5 | 12.5 | 5140 | 5796 | 10000 | |
| B-45C | 245 | 74.0 | 74.0 | 7.92 | 7.08 | 1385 | 360 | 8720 | 18000 |
| B-47E | 268 | 107.1 | 105.5 | 10.6 | 9.6 | 2600 | 620 | | |
| B-50A | 353 | 99.0 | 99.0 | 9.5 | 9.6 | 2316 | 1914 | 2111 | |
| B-52G | 900 | 157.6 | 155.6 | 13.1 | 9.8 | 4950 | 720 | 10000 | |
| B-57C | 193 | 65.5 | 65.5 | 6.5 | 6.5 | 1025 | 580 | 5523 | |
| YB-58A | 0 | 96.78 | 92.13 | 6.50 | 5.25 | 1320 | 406 | | 6230 |
| B-66B | 167 | 75.2 | 72.3 | 7.70 | 7.20 | 1674 | 625 | 10000 | |
| B-70 | 322 | 193.8 | 189.04 | 16.37 | 30.5 | 7603 | | 16000* | 10000 |

Table A-1. BOMBER AIRCRAFT (Concluded)

| | ARMAMENT | STRESS GROSS WEIGHT | STRESS LOAD FACTOR | STRESS FUEL WEIGHT | MAXIMUM |
|-------|----------|---------------------------|--------------------------|--------------------------|---------|
| | POUNDS | POUNDS | POUNDS | POUNDS | KNOTS |
| B-17G | 5534 | 48726 | 4.5 | 4710 | 285 |
| B-24J | 8944 | 4100 | 5.5 | 7570 | 290 |
| B-25 | 2552 | 26122 | 5.5 | 2620 | 257 |
| B-26C | 1572 | 26000 | 6.75 | 2669 | 324 |
| B-29A | 5300 | 105000 | 4.5 | 21083 | 354 |
| B-32 | 3705 | 100000 | 4.5 | 30672 | 312 |
| B-36H | 15796 | 357500 | 3.0 | 170840 | 365 |
| B-45C | 9080 | 93121 | 4.5 | 30942 | 498 |
| B-47E | 18620 | 220000 | 3.0 | 115345 | 528 |
| B-50A | 4025 | 120000 | 4.0 | 31680 | 347 |
| B-52G | 10720 | 276100 | 5.25 | 97996 | 553 |
| B-57C | 6103 | 38689 | 7.5 | 3766 | 520 |
| B-58A | 6636 | 107250 | 4.5 | 45588 | 1147 |
| B-66B | 10625 | 78000 | 4.8 | 23170 | 559 |
| B-70 | 26000 | 554609 | 3.0 | 329126 | 1721 |

Table A-2. CARGO AIRCRAFT

| | WING WEIGHT POUNDS | TAIL WEIGHT POUNDS | FUSELAGE WEIGHT POUNDS | LANDING GEAR WT. POUNDS | SURFACE CONTROL WT. POUNDS | NACELLE WEIGHT POUNDS | PROPULSION WEIGHT POUNDS | ENGINE WEIGHT POUNDS | FUEL SYS- TEM WEIGHT POUNDS | INST. & NAVI. EQUIP. WT. POUNDS |
|--------|--------------------------|--------------------------|------------------------------|-------------------------------|----------------------------------|-----------------------------|--------------------------------|----------------------------|-----------------------------------|--|
| C-47A | 3637 | 513 | 2136 | 1763 | 336 | 804 | 6064 | 3031 | 534 | 122 |
| C-54G | 6565 | 1139 | 5528 | 4174 | 939 | 2118 | 13948 | 6310 | 1360 | 419 |
| C-74A | 18725 | 2611 | 12450 | 10314 | 1407 | 5517 | 23496 | 13496 | 3146 | 405 |
| C-82A | 5948 | 892 | 5020 | 4019 | 849 | 1914 | 9391 | 4700 | 695 | 126 |
| C-97C | 15389 | 2078 | 13572 | 7112 | 891 | 4753 | 23051 | 13844 | 1488 | 487 |
| C-118A | 8940 | 1697 | 8099 | 4446 | 810 | 3292 | 16731 | 9414 | 2058 | 867 |
| C-119G | 7247 | 1195 | 7170 | 4200 | 1137 | 2608 | 12156 | 6906 | 1860 | 280 |
| C-121C | 11010 | 2618 | 12556 | 5709 | 1777 | 4476 | 21353 | 14603 | 1367 | 702 |
| C-123B | 5892 | 1468 | 7011 | 2346 | 593 | 1403 | 8640 | 4780 | 1396 | 271 |
| C-124C | 18135 | 3025 | 18073 | 11700 | 1493 | 6119 | 27019 | 15551 | 4059 | 769 |
| C-130A | 10389 | 2893 | 12035 | 4509 | 1414 | 2536 | 12477 | 6406 | 1033 | 608 |
| C-131B | 5226 | 1191 | 4884 | 2251 | 776 | 1739 | 7918 | 4756 | 309 | 250 |
| C-133A | 27603 | 6019 | 32240 | 10656 | 1859 | 3772 | 20663 | 10785 | 2047 | 687 |
| KC-135 | 24719 | 4958 | 18176 | 10698 | 1897 | 2547 | 19584 | 14862 | 1430 | 523 |

Table A-2. CARGO AIRCRAFT (Cont'd)

| | HYDRAULIC & PNEUMATIC WEIGHT POUNDS | ELECTRICAL WEIGHT POUNDS | ELECTRONIC WEIGHT POUNDS | FURNISHINGS & EQUIPMENT WEIGHT POUNDS | AIR COND & ANTI-ICING WEIGHT POUNDS | FIXED EQUIPMENT WEIGHT POUNDS | WEIGHT EMPTY POUNDS | WEIGHT EMPTY - FIXED EQUIP. POUNDS | W S |
|--------|--|--------------------------------|--------------------------------|--|--|--|---------------------------|---|--------|
| C-47A | 140 | 495 | 770 | 1450 | 233 | 3210 | 17873 | 14663 | 27.1 |
| C-54G | 272 | 787 | 835 | 3555 | 481 | 6349 | 38656 | 32307 | 42.6 |
| C-74A | 403 | 1204 | 867 | 6740 | 1420 | 11464 | 85985 | 74521 | 57.8 |
| C-82A | 163 | 525 | 792 | 1125 | 375 | 2943 | 29062 | 26119 | 32.0 |
| C-97C | 465 | 3043 | 1087 | 2444 | 1340 | 9106 | 75974 | 66868 | 84.8 |
| C-118A | 280 | 2162 | 1682 | 4298 | 3092 | 12828 | 56843 | 44015 | 70.4 |
| C-119G | 459 | 1116 | 1092 | 1313 | 1255 | 5677 | 41211 | 23297 | 44.2 |
| C-121C | 726 | 1627 | 1974 | 1915 | 3912 | 17381 | 76154 | 58772 | 80.6 |
| C-123B | 156 | 826 | 688 | 745 | 1042 | 3913 | 31232 | 27319 | 44.2 |
| C-124C | 582 | 1952 | 1886 | 7539 | 3293 | 16536 | 102181 | 85645 | 73.8 |
| C-130A | 640 | 1856 | 1508 | 3065 | 2293 | 10381 | 57407 | 47026 | 61.9 |
| C-131B | 264 | 1367 | 1046 | 1443 | 1211 | 5615 | 29604 | 23989 | 51.1 |
| C-133A | 2815 | 2135 | 2254 | 4620 | 3114 | 15930 | 118686 | 102756 | 102.9 |
| KC-135 | 789 | 2333 | 2008 | 1483 | 1579 | 10491 | 92678 | 82187 | 94.5 |

Table A-2. CARGO AIRCRAFT (Cont'd)

| | CREW WEIGHT POUNDS | FUEL WEIGHT POUNDS | OIL WEIGHT POUNDS | CARGO WEIGHT POUNDS | USEFUL LOAD WEIGHT POUNDS | NORMAL GROSS WEIGHT POUNDS | SURFACE AREA WING SQ. FT. | SPAN AERODYNAMIC FEET | SPAN STRUCTURAL FEET |
|--------|--------------------------|--------------------------|-------------------------|---------------------------|------------------------------------|-------------------------------------|------------------------------------|-----------------------------|----------------------------|
| C-47A | 600 | 4848 | 519 | 2925 | 8892 | 26765 | 988 | 95.0 | 95.0 |
| C-54G | 1200 | 7351 | 1149 | 13560 | 23344 | 62000 | 1457 | 117.5 | 117.5 |
| C-74A | 1800 | 27322 | 1495 | 28137 | 58959 | 145000 | 2510 | 173.75 | 173.75 |
| C-82A | 1000 | 11320 | 890 | 2508 | 15745 | 44805 | 1400 | 106.0 | 106.0 |
| C-97C | 1000 | 24349 | 1375 | 46500 | 74036 | 150000 | 1769 | 141.2 | 141.2 |
| C-118A | 800 | 32761 | 1620 | 10193 | 46157 | 103000 | 1463 | 117.5 | 117.5 |
| C-119G | 1000 | 15636 | 1025 | 4584 | 22705 | 64000 | 1447.24 | 109.25 | 109.25 |
| C-121C | 1600 | 28457 | 1460 | 10358 | 56846 | 133000 | 1650.0 | 123.0 | 123.0 |
| C-123B | 400 | 5744 | 354 | 16000 | 22768 | 54000 | 1223.22 | 110.0 | 110.0 |
| C-124C | 1000 | 22769 | 2620 | 55262 | 82819 | 185000 | 2506 | 174.13 | 174.13 |
| C-130A | 800 | 23999 | 408 | 25000 | 50593 | 108000 | 1745.5 | 132.60 | 132.60 |
| C-131B | 400 | 10433 | 663 | 5689 | 17396 | 47000 | 920 | 105.33 | 105.33 |
| C-133A | 1000 | 61090 | 2620 | 97162 | 161186 | 275000 | 2673.1 | 179.65 | 175.65 |
| KC-135 | 800 | 89800 | 303 | 45000 | 137322 | 230000 | 2433 | 130.83 | 159.71 |

Table A-2. CARGO AIRCRAFT (Cont'd)

| WING AR | TIP CHORD THICKNESS INCHES | TIP CHORD LENGTH INCHES | TIP CHORD THICKNESS % CHORD PERCENT | ROOT CHORD THICKNESS INCHES | ROOT CHORD LENGTH INCHES | ROOT CHORD THICKNESS % CHORD PERCENT | WING TAPER RATIO | SWEEP ANGLE 25% CHORD |
|------------|-------------------------------------|----------------------------------|--|--------------------------------------|-----------------------------------|---|------------------------|-----------------------------|
| C-47A | 9.13 | 51.4 | 6.22 | 29.9 | 170 | 17.58 | 3.024 | 1 |
| C-54G | 9.48 | 70.5 | 12.06 | 36.6 | 229 | 15.98 | 3.079 | 1 |
| C-74A | 12.03 | 66.4 | 14.0 | 53.5 | 282 | 18.97 | 2.355 | 1 |
| C-82A | 8.03 | 107.0 | 9.0 | 38.5 | 214 | 18.00 | 5.000 | 1 |
| C-97C | 11.5 | 89.0 | 9.0 | 44.9 | 204 | 22.01 | 4.363 | 1 |
| C-118A | 9.44 | 71.3 | 11.92 | 36.6 | 228.8 | 16.00 | 3.116 | 1 |
| C-119G | 8.25 | 107.0 | 9.00 | 38.7 | 214.87 | 18.00 | 4.980 | 1 |
| C-121C | 9.17 | 102.0 | 11.96 | 39.6 | 220.0 | 18.00 | 4.636 | 1 |
| C-123B | 9.89 | 94.8 | 8.90 | 30.70 | 179.54 | 17.10 | 5.280 | 1 |
| C-124C | 11.96 | 66.4 | 14.00 | 53.50 | 282.0 | 18.97 | 2.355 | 1 |
| C-130A | 10.09 | 100.0 | 12.00 | 34.6 | 192.0 | 18.02 | 5.208 | 1 |
| C-131B | 12.06 | 54.0 | 15.00 | 32.3 | 162.0 | 20.00 | 3.333 | 1 |
| C-133A | 12.07 | 66.4 | 15.00 | 49.95 | 290.9 | 17.17 | 2.283 | 1 |
| KC-135 | 7.04 | 112.00 | 9.00 | 56.40 | 337.98 | 16.69 | 3.314 | |

Table A-2. CARGO AIRCRAFT (Cont'd)

| | TOTAL TAIL AREA SQ. FT. | VERTICAL TAIL AREA SQ. FT. | HORIZONTAL TAIL AREA SQ. FT. | FUSELAGE LENGTH (BASIC) FEET | AIRCRAFT LENGTH FEET | FUSELAGE DEPTH FEET | FUSELAGE WIDTH FEET | FUSELAGE WETTED AREA SQ. FT. | STRESS GROSS WEIGHT POUNDS |
|---------|----------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|----------------------------|---------------------------|---------------------------|---------------------------------------|-------------------------------------|
| C-47A | 332.0 | 126.0 | 206.0 | 63.75 | 63.75 | 8.7 | 8.1 | 1190 | 26000 |
| C-54G | 467.0 | 179.0 | 288.0 | 93.8 | 93.8 | 11.5 | 10.4 | 2490 | 62000 |
| C-74A | 1037.0 | 344.0 | 693.0 | 124.0 | 124.0 | 13.2 | 13.2 | 3940 | 145000 |
| C-82A | 509.0 | 199.0 | 310.0 | 55.42 | 55.42 | 13.5 | 10.3 | 1830 | 42000 |
| C-97C | 639.0 | 306.0 | 333.0 | 110.3 | 110.3 | 15.21 | 11.0 | 3607 | 150000 |
| C-118A | 550.9 | 185.0 | 365.9 | 106.8 | 106.8 | 11.50 | 10.4 | 2976 | 107000 |
| C-119G | 546.5 | 205.5 | 341.0 | 86.5 | 86.5 | 13.5 | 11.5 | 2210 | 64000 |
| C-121C | 756.0 | 302.0 | 454.0 | 116.2 | 116.2 | 11.6 | 11.6 | 2659 | 134400 |
| C-123B | 600.57 | 255.0 | 345.57 | 76.25 | 76.25 | 11.67 | 14.08 | 2250 | 54000 |
| C-124C | 1146.0 | 465.0 | 681.0 | 130.0 | 130.0 | 20.92 | 13.75 | 5770 | 185000 |
| C-130A | 796.0 | 300.0 | 496.0 | 97.8 | 97.8 | 13.25 | 14.16 | 3460 | 108000 |
| C-131B | 393.0 | 159.0 | 234.0 | 79.2 | 79.2 | 9.4 | 9.4 | 3300 | 53200 |
| C-133A | 1441.2 | 640.2 | 801.0 | 153.37 | 157.54 | 16.10 | 16.67 | 6472 | 275000 |
| KC-135A | 812.4 | 312.4 | 500.0 | 128.83 | 128.83 | 13.83 | 12.00 | 4420 | 275000 |

Table A-2. CARGO AIRCRAFT (Concluded)

| | STRESS FUEL WEIGHT POUNDS | STRESS CARGO WEIGHT POUNDS | STRESS LOAD FACTOR | V MAX KNOTS | $f(\lambda)$ | $\cos \lambda$ |
|---------|--|---|--------------------------|--------------------|--------------|----------------|
| C-47A | 4848 | 2160 | 4.65 | 202 | .418 | 1.0000 |
| C-54G | 7351 | 13560 | 4.50 | 268 | .418 | 1.0000 |
| C-74A | 27322 | 28137 | 3.00 | 202 | .411 | 1.0000 |
| C-82A | 11320 | 2508 | 5.50 | 246 | .434 | 1.0000 |
| C-97C | 24349 | 46500 | 3.72 | 334 | .429 | 1.0000 |
| C-118A | 32760 | 14194 | 3.75 | 320 | .418 | 1.0000 |
| C-119G | 15636 | 4584 | 4.50 | 253 | .434 | 1.0000 |
| C-121C | 24400 | 31640 | 3.75 | 320 | .431 | 1.0000 |
| C-123B | 5745 | 16000 | 4.50 | 210 | .436 | 1.0000 |
| C-124C | 22769 | 55262 | 3.75 | 288 | .411 | 1.0000 |
| C-130A | 23999 | 25000 | 4.50 | 332 | .435 | 1.0000 |
| C-131B | 10420 | 12246 | 4.72 | 278 | .421 | 1.0000 |
| C-133A | 117360 | 38927 | 3.75 | 305 | .410 | 1.0000 |
| KC-135A | 110000 | 69860 | 3.00 | | | |

Table A-3. FIGHTER AIRCRAFT

| | HYDRAULIC & PNEUMATIC WEIGHT POUNDS | ELECTRICAL WEIGHT POUNDS | ELECTRONIC WEIGHT POUNDS | ARMAMENT WEIGHT POUNDS | FURNISHINGS & EQUIPMENT WEIGHT POUNDS | AIR COND & ANTI-ICING WEIGHT POUNDS | FIXED EQUIPMENT WEIGHT POUNDS | WEIGHT EMPTY POUNDS | WEIGHT EMPTY- FIXED EQUIP. POUNDS |
|--------|--|--------------------------------|--------------------------------|------------------------------|--|--|--|---------------------------|--|
| F-80C | 139 | 334 | 161 | 326 | 116 | 78 | 1214 | 8423 | 6997 |
| F-84F | 292 | 504 | 289 | 788 | 198 | 103 | 2325 | 13674 | 11349 |
| F-84G | 233 | 632 | 246 | 710 | 192 | 110 | 2268 | 11263 | 8995 |
| F-86K | 307 | 725 | 226 | 916 | 169 | 271 | 2820 | 13402 | 10582 |
| F-89D | 85 | 929 | 441 | 1120 | 533 | 495 | 3969 | 27936 | 23967 |
| F-94C | 152 | 501 | 391 | 1040 | 185 | 395 | 2940 | 12014 | 9074 |
| F-100D | 148 | 496 | 433 | 1026 | 231 | 297 | 2976 | 20973 | 17997 |
| F-101A | 378 | 752 | 991 | 415 | 236 | 136 | 3167 | 24720 | 20983 |
| F-102A | 318 | 594 | 2001 | 589 | 227 | 259 | 4230 | 19130 | 14810 |
| F-104C | 281 | 422 | 581 | 309 | 241 | 185 | 2221 | 12625 | 10404 |
| F-104D | 284 | 444 | 676 | 109 | 459 | 203 | 2408 | 13008 | 10659 |
| F-105B | 460 | 805 | 726 | 791 | 262 | 184 | 3813 | 25260 | 21447 |
| F-106A | 388 | 597 | 2653 | 630 | 284 | 387 | 5232 | 23583 | 18351 |
| F-107A | 164 | 487 | 375 | 1125 | 301 | 450 | 3249 | 25144 | 21895 |
| F-108A | 939 | 1754 | 3572 | 928 | 1530 | 1153 | 9434 | 50907 | 41473 |
| T-33A | 162 | 369 | 305 | 152 | 243 | 109 | 1394 | 8483 | 7055 |

Table A-3. FIGHTER AIRCRAFT (Cont'd)

| | WING WEIGHT POUNDS | TAIL WEIGHT POUNDS | FUSELAGE WEIGHT POUNDS | LANDING GEAR WT. POUNDS | SURFACE CONTROL WT. POUNDS | NACELLE WEIGHT POUNDS | PROPULSION WEIGHT POUNDS | ENGINE WEIGHT POUNDS | FUEL SYS- TEM WEIGHT POUNDS | INST. & NAVIG. EQUIP. WT. POUNDS |
|--------|--------------------------|--------------------------|------------------------------|-------------------------------|----------------------------------|-----------------------------|--------------------------------|----------------------------|-----------------------------------|---|
| F-80C | 1506 | 225 | 1309 | 608 | 202 | --- | 3348 | 1871 | 1183 | 60 |
| F-84F | 2717 | 471 | 1931 | 1149 | 612 | 69 | 4400 | 2697 | 1080 | 99 |
| F-84G | 1902 | 288 | 1677 | 980 | 395 | 33 | 3720 | 2380 | 969 | 72 |
| F-86K | 2133 | 346 | 2232 | 834 | 497 | 119 | 4421 | 3366 | 570 | 163 |
| F-89D | 6083 | 944 | 2881 | 2256 | 1041 | 787 | 7297 | 5588 | 1260 | 239 |
| F-94C | 1975 | 425 | 1946 | 610 | 339 | --- | 3765 | 2725 | 865 | 70 |
| F-100D | 3891 | 979 | 3683 | 1484 | 1071 | 104 | 6778 | 5130 | 795 | 233 |
| F-101A | 3126 | 701 | 3283 | 1552 | 671 | 86 | 11310 | 9542 | 985 | 185 |
| F-102A | 3000 | 535 | 2409 | 1056 | 413 | 39 | 6358 | 4993 | 394 | 141 |
| F-104C | 1168 | 593 | 2687 | 825 | 638 | 112 | 4416 | 3290 | 565 | 150 |
| F-104D | 1151 | 589 | 2928 | 855 | 769 | 111 | 4256 | 3250 | 431 | 190 |
| F-105B | 3615 | 983 | 5954 | 1995 | 1418 | 106 | 7458 | 5838 | 672 | 245 |
| F-106A | 3274 | 665 | 4604 | 1231 | 461 | 38 | 8078 | 5816 | 751 | 129 |
| F-107A | 3821 | 1435 | 4860 | 1424 | 1590 | 89 | 8676 | 6201 | 1005 | 301 |
| F-108A | 6737 | 1535 | 12972 | 2180 | 2625 | 138 | 15286 | 10286 | 1614 | 508 |
| T-33A | 1517 | 242 | 1549 | 661 | 255 | --- | 2802 | 1908 | 595 | 90 |

Table A-3. FIGHTER AIRCRAFT (Cont'd)

| | CREW WEIGHT POUNDS | FUEL WEIGHT POUNDS | OIL WEIGHT POUNDS | USEFUL LOAD WEIGHT POUNDS | NORMAL GROSS WEIGHT POUNDS | $\frac{W}{S}$ LB/FT ² | $R_{u_1} = \frac{\text{USEFUL } L}{W_g}$ | WING GROSS AREA SQ. FT. | WING SPAN SQ. FT. |
|--------|--------------------------|--------------------------|-------------------------|------------------------------------|-------------------------------------|-------------------------------------|--|----------------------------------|-------------------------|
| F-80C | 230 | 2914 | 23 | 4589 | 13012 | 54.76 | .352 | 237.6 | 38.9 |
| F-84F | 230 | 3829 | 40 | 5074 | 18748 | 57.7 | .270 | 324.7 | 33.6 |
| F-84G | 230 | 2873 | 70 | 4159 | 15422 | 59.3 | .270 | 260 | 36.42 |
| F-84K | 230 | 3977 | 23 | 5012 | 18414 | 63.96 | .272 | 287.9 | 37.12 |
| F-89D | 460 | 7668 | 54 | 10084 | 38020 | 62.7 | .265 | 606 | 52.0 |
| F-94C | 460 | 2440 | 23 | 3452 | 15541 | 66.75 | .222 | 232.8 | 37.26 |
| F-100D | 230 | 7820 | 75 | 9410 | 30383 | 75.9 | .310 | 400.18 | 38.58 |
| F-101A | 230 | 14075 | 125 | 15754 | 40433 | 109.9 | .390 | 368.0 | 39.7 |
| F-102A | 230 | 7207 | 62 | 8960 | 28090 | 40.4 | .319 | 695.1 | 38.13 |
| F-104C | 230 | 5920 | 30 | 7040 | 19665 | 100.3 | .358 | 196.1 | 21.9 |
| F-104D | 460 | 4290 | 30 | 4970 | 17979 | 91.7 | .277 | 196.1 | 21.9 |
| F-105B | 230 | 7678 | 60 | 9037 | 34297 | 89.1 | .264 | 385.0 | 35.0 |
| F-106A | 230 | 8914 | 60 | 10639 | 34222 | 49.0 | .311 | 697.83 | 38.13 |
| F-107A | 230 | 11291 | 67 | 15436 | 40580 | 102.8 | .380 | 394.84 | 36.58 |
| F-108A | 460 | 47920 | 166 | 51626 | 102533 | 54.96 | .504 | 187.7 | 57.4 |
| T-33A | 460 | 2379 | 23 | 3664 | 12200 | | | 234.8 | 37.4 |

Table A-3. FIGHTER AIRCRAFT (Cont'd)

| WING STRUCTURAL SPAN FEET | WING AR | TIP CHORD THICKNESS INCHES | TIP CHORD LENGTH INCHES | TIP CHORD THICKNESS % CHORD PERCENT | ROOT CHORD MAXIMUM THICKNESS INCHES | ROOT CHORD LENGTH INCHES | ROOT CHORD THICKNESS % CHORD PERCENT | WING TAPER RATIO |
|------------------------------------|------------|-------------------------------------|----------------------------------|--|--|-----------------------------------|---|------------------------|
| F-80C | 6.37 | 5.45 | 41.8 | 13 | 14.3 | 110 | 13 | 0.38 |
| F-84F | 3.48 | 6.96 | 86.0 | 8.1 | 12.04 | 148.59 | 8.1 | 0.58 |
| F-84G | 5.10 | 7.54 | 62.88 | 12 | 13.23 | 110.28 | 12 | 0.57 |
| F-86K | 4.79 | 6.98 | 63.47 | 11 | 14.35 | 123.69 | 12 | 0.51 |
| F-89D | 4.46 | 8.4 | 93.5 | 9 | 16.8 | 187 | 9 | 0.5 |
| F-94C | 5.96 | 4.19 | 41.9 | 10 | 11 | 110 | 10 | 0.38 |
| F-100D | 3.72 | 3.49 | 49.82 | 7 | 13.32 | 190.35 | 7 | 0.26 |
| F-101A | 4.28 | 2.82 | 49.28 | 15 | 11.55 | 173.25 | 6.7 | 0.28 |
| F-102A | 2.1 | 1.8 | 0 | 0 | 16.65 | 427.6 | 4 | 0 |
| F-104C | 2.45 | 2.0 | 58.0 | 3.5 | 5.61 | 155.83 | 3.6 | 0.38 |
| F-104D | 2.45 | 2.0 | 58.0 | 3.5 | 5.61 | 155.83 | 3.6 | 0.38 |
| F-105B | 3.18 | 3.36 | 84 | 4 | 9.9 | 180.0 | 5.5 | 0.47 |
| F-106A | 2.1 | | | | 16.65 | 427.6 | 4.0 | 0 |
| F-107A | 3.39 | 2.85 | 57.1 | 5 | 9.52 | 222.12 | 4.2 | 0.257 |
| F-108A | 1.76 | 0.9 | 34.6 | 2.6 | 11.9 | 759.9 | 1.6 | 0.26 |
| T-33A | 5.96 | 5.45 | 41.8 | 13 | 14.3 | 110 | 13 | 0.38 |

Table A-3. FIGHTER AIRCRAFT (Cont'd)

| | WING SWEEP CHORD 25% DEGREES | $f(\lambda)$ | $\cos \lambda$ | TOTAL TAIL AREA SQ. FT | VERTICAL TAIL AREA SQ. FT. | HORIZONTAL TAIL AREA SQ. FT. | AIRCRAFT LENGTH FEET | FUSELAGE LENGTH FEET | FUSELAGE DEPTH FEET |
|---------|---------------------------------------|--------------|----------------|---------------------------------|-------------------------------------|---------------------------------------|----------------------------|----------------------------|---------------------------|
| F-80C | 4.7 | .425 | .99668 | 65.6 | 27.36 | 38.24 | 34.5 | 34.5 | 4.67 |
| F-84F | 40 | .439 | .76604 | 95.3 | 39.49 | 55.8 | 43.4 | 38.5 | 7.17 |
| F-84G | 0 | .439 | 1.00000 | 79.33 | 30.88 | 48.45 | 38.45 | 38.5 | 5.19 |
| F-86K | 35.7 | .435 | .81208 | 84.95 | 31.05 | 53.90 | 40.9 | 38.04 | 5.71 |
| F-89D | 2.5 | .434 | .99905 | 155.5 | 44.2 | 111.3 | 53.75 | 53.75 | 6.17 |
| F-94C | 4.7 | .425 | .99668 | 88.3 | 28.0 | 60.0 | 43.6 | 41.42 | 4.67 |
| F-100D | 45 | .413 | .70711 | 154.42 | 55.56 | 98.86 | 48.16 | 45.64 | 5.63 |
| F-101A | 36.5 | .416 | .80386 | 160.0 | 84.9 | 75.1 | 67.45 | 66.96 | 7.03 |
| F-102A | 0 | .379 | 1.00000 | 95.14 | 95.14 | 0 | 63.18 | 61.12 | 6.9 |
| F-104C | 18.3 | .425 | .94943 | 83.2 | 35.1 | 48.1 | 54.77 | 51.25 | 4.70 |
| F-104D | 18.3 | .425 | .94943 | 83.2 | 43.7 | 48.1 | 54.77 | 51.25 | 4.70 |
| F-105B | 45 | .432 | .70711 | 123.4 | 63.0 | 60.37 | 63.1 | 63.1 | 7.41 |
| F-106A | 0 | .379 | 1.00000 | 105 | 105.0 | 0 | 70.73 | 63.03 | 6.49 |
| F-107A | 45 | .413 | .70711 | 180.07 | 83.79 | 96.28 | 60.82 | 56.57 | 7.36 |
| F-108 A | 0 | .386 | 1.00000 | 129.8 | 129.8 | 0 | 92.4 | 76.6 | 6.6 |
| T-33A | 4.7 | | | 65.6 | 27.36 | 38.24 | 37.7 | 37.7 | 4.67 |

Table A-3. FIGHTER AIRCRAFT (Cont'd)

| | FUSELAGE WIDTH FEET | FUSELAGE WETTED AREA SQ. FT. | MISSILE WEIGHT POUNDS | ROCKET WEIGHT POUNDS | AMMO WEIGHT POUNDS | BOMB WEIGHT POUNDS | STRESS GROSS WEIGHT POUNDS | STRESS LOAD FACTOR | STRESS FUEL WEIGHT POUNDS |
|--------|---------------------------|---------------------------------------|-----------------------------|----------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|------------------------------------|
| F-80C | 4.67 | 410 | | 1120 | 540 | | 12200 | 11.0 | 2102 |
| F-84F | 4.17 | 478 | 540 | | | 7000 | 18500 | 14.0 | 3581 |
| F-84G | 4.17 | 439 | | | 540 | | 15600 | 11.0 | 2873 |
| F-86K | 5.00 | 552.43 | | | 370 | | 17090 | 8.1 | 2653 |
| F-89D | 6.98 | 583 | | 1882 | | | 38263 | 8.5 | 7668 |
| F-94C | 4.67 | 506 | | 445 | | | 15000 | 13.0 | 1909 |
| F-100D | 5.58 | 741.58 | | | 560 | | 28177 | 11.0 | 5614 |
| F-101A | 7.67 | 1009.2 | | | 560 | | 37000 | 11.0 | 10643 |
| F-102A | 6.5 | 979 | 762 | 432 | | | 25500 | 10.5 | 4617 |
| F-104C | 5.5 | 669 | | | 510 | | 16945 | 11.0 | 3200 |
| F-104D | 5.5 | 669 | | | | | 16400 | 11.0 | 2711 |
| F-105B | 4.38 | 981 | | | 757 | | 31392 | 13.0 | 4773 |
| F-106A | 8.06 | 1045 | 540 | 816 | | | 31050 | 10.5 | 5742 |
| F-107A | 5.65 | 936.46 | | | 560 | 2000 | 31858 | 11.0 | 2569 |
| F-108A | 2039 | | 2454 | | | | 74543 | 5.33 | 19930 |
| T-33A | 4.67 | 410 | | | 180 | | 12200 | 11.0 | 2379 |

Table A-3. FIGHTER AIRCRAFT (Cont'd)

| | $\frac{W_{gn}}{2}$ | $b_s \dot{f}(\lambda)$ | $\frac{W_{gn} b_s f(\lambda)}{2}$ | $\frac{W_{gn}}{2M^2 S}$ | STRESS $\frac{W_g}{S}$ | $\frac{AR}{C_n}$ | V_{MAX} KNOTS | V^2 | M |
|--------|--------------------|------------------------|-----------------------------------|-------------------------|---------------------------|------------------|--------------------|---------|--------|
| F-80C | 671.00 | 16.58 | 1.11×10^6 | 414 | 51.34 | .0597 | 475 | 225625 | .826 |
| F-84F | 1295.00 | 19.25 | 2.49 | 492.5 | 56.98 | .0234 | 595 | 354025 | .9 |
| F-84G | 858.00 | 15.99 | 1.37 | | 60.00 | .0464 | 595 | 354025 | 1.0347 |
| F-86K | 692.15 | 19.76 | 1.37 | 296 | 59.36 | .0386 | 600 | 360000 | .9 |
| F-89D | 1626.18 | 22.64 | 3.68 | 313 | 63.14 | .0239 | 557 | 310249 | .9686 |
| F-94C | 975.00 | 15.89 | 1.55 | 440 | 64.43 | .05418 | 560 | 313600 | .9739 |
| F-100D | 1549.73 | 27.53 | 3.49 | 204 | 70.41 | .0196 | 792 | 627264 | 1.3773 |
| F-101A | 2035.00 | 20.55 | 4.18 | 246 | 100.5 | .0247 | 863 | 744769 | 1.5 |
| F-102A | 1338.75 | 14.45 | 1.93 | 137 | 36.7 | .0049 | 680 | 462400 | 1.1826 |
| F-104C | 931.98 | 9.81 | .914 | 118.7 | 86.4 | .0157 | 1150 | 1322500 | 2.00 |
| F-104D | 902.00 | 9.81 | | | 83.7 | | 1150 | 1322500 | 2.00 |
| F-105B | 2040.48 | 21.38 | 4.36 | 123.3 | 68.2 | .0177 | 1100 | 1210000 | 2.08 |
| F-106A | 1630.12 | 14.45 | 2.36 | | 44.6 | | 1160 | 1345600 | 2.017 |
| F-107A | 1752.19 | 21.36 | 3.74 | 75 | 80.8 | .0153 | 1400 | 1960000 | 2.4347 |
| F-108A | 2981.72 | 21.75 | 6.48 | 17.8 | 40.0 | .00232 | 1721 | 2961841 | 3.00 |
| T-33A | | | | | | | 475 | | |

Table A-3. FIGHTER AIRCRAFT (Concluded)

| | M^2 | ALT | $\frac{t}{c}$ ave | $\frac{1}{2} \rho V_M^2$ | $\frac{1}{M^2}$ |
|--------|-------|-------|-------------------|--------------------------|-----------------|
| F-80C | .682 | | | | 1.47 |
| F-84F | .81 | S.L. | 10 | 421 | 1.23 |
| F-84G | 1.071 | | | | |
| F-86K | .81 | S.L. | 11.5 | 428 | 1.23 |
| F-89D | .937 | 10600 | 9 | 265 | 1.17 |
| F-94C | .949 | | | | |
| F-100D | 1.896 | 35000 | 7 | 231 | .527 |
| F-101A | 2.25 | 35000 | 6.5 | 274 | .444 |
| F-102A | 1.40 | 35000 | 4 | 170 | .714 |
| F-104C | 4.00 | 35000 | 3.4 | 487 | .250 |
| F-104D | 4.00 | | | | .250 |
| F-105B | 4.32 | 36000 | 4.6 | 526 | .231 |
| F-106A | 4.08 | 35000 | 4 | 496 | .245 |
| F-107A | 5.93 | | | | .167 |
| F-108A | 9.00 | 76550 | 2.3 | 148 | .111 |
| T-33A | | | | | |

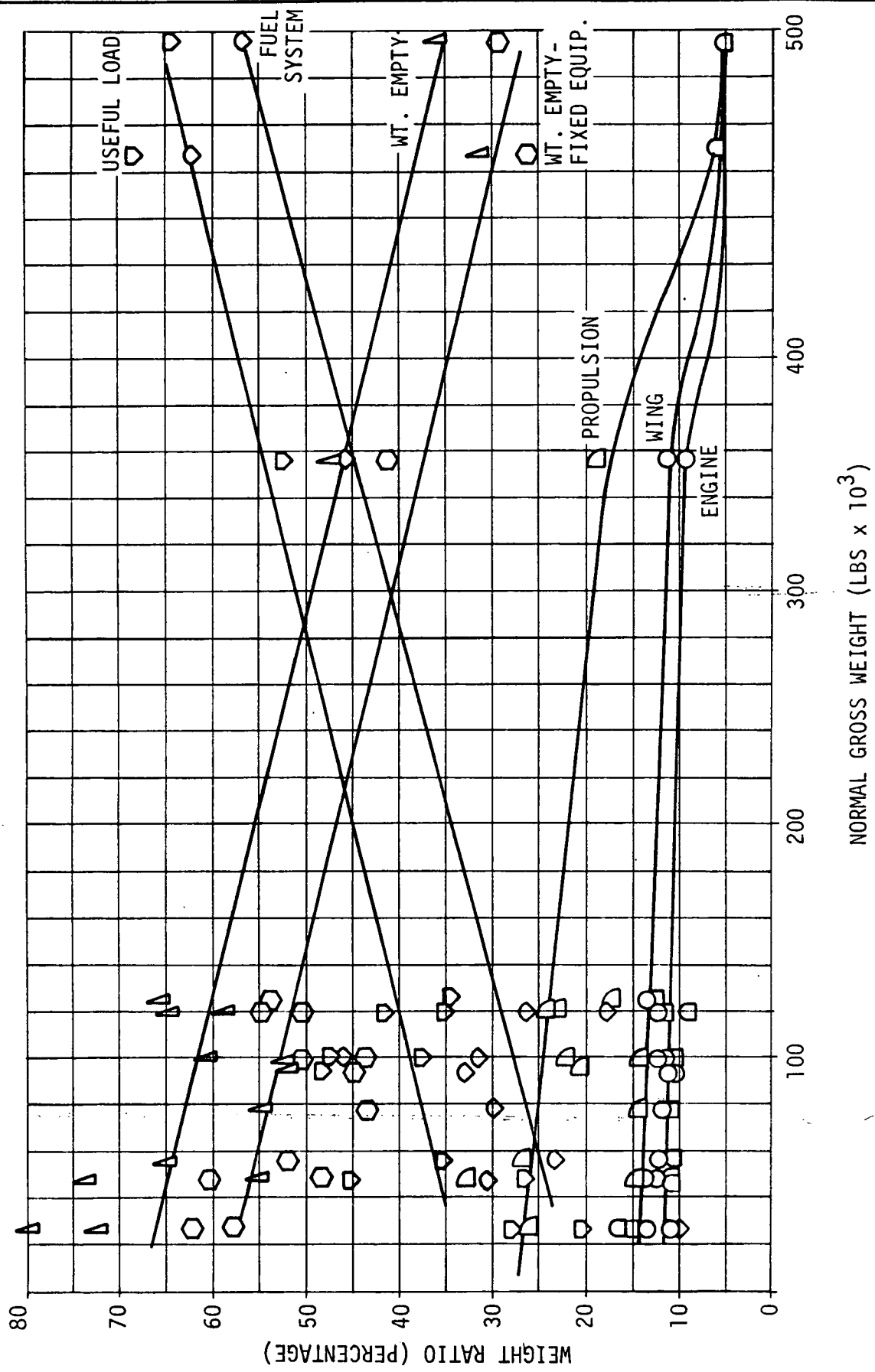


Figure A-1. WEIGHT ESTIMATION DATA - BOMBER AIRCRAFT

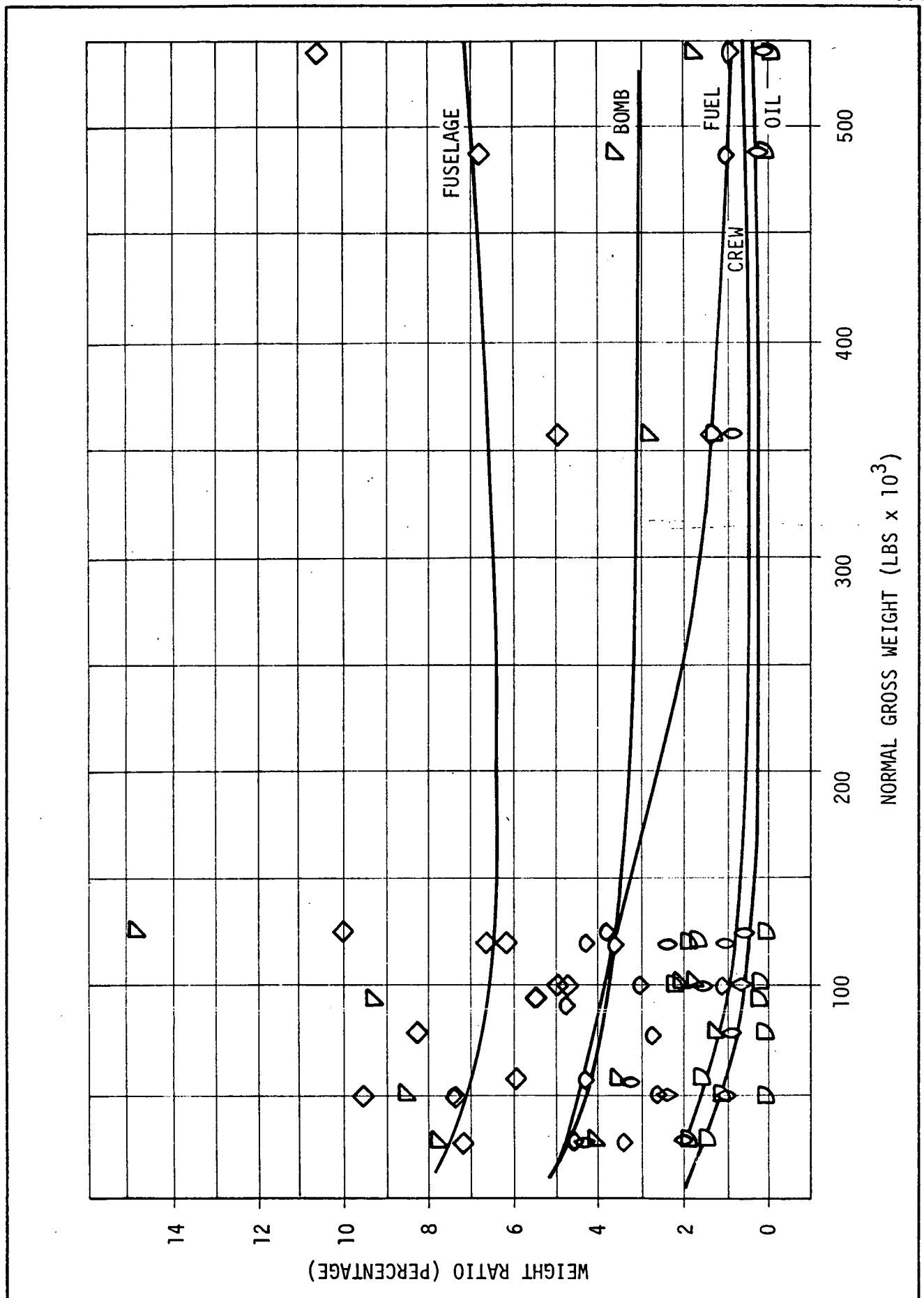


Figure A-2. WEIGHT ESTIMATION DATA - BOMBER AIRCRAFT

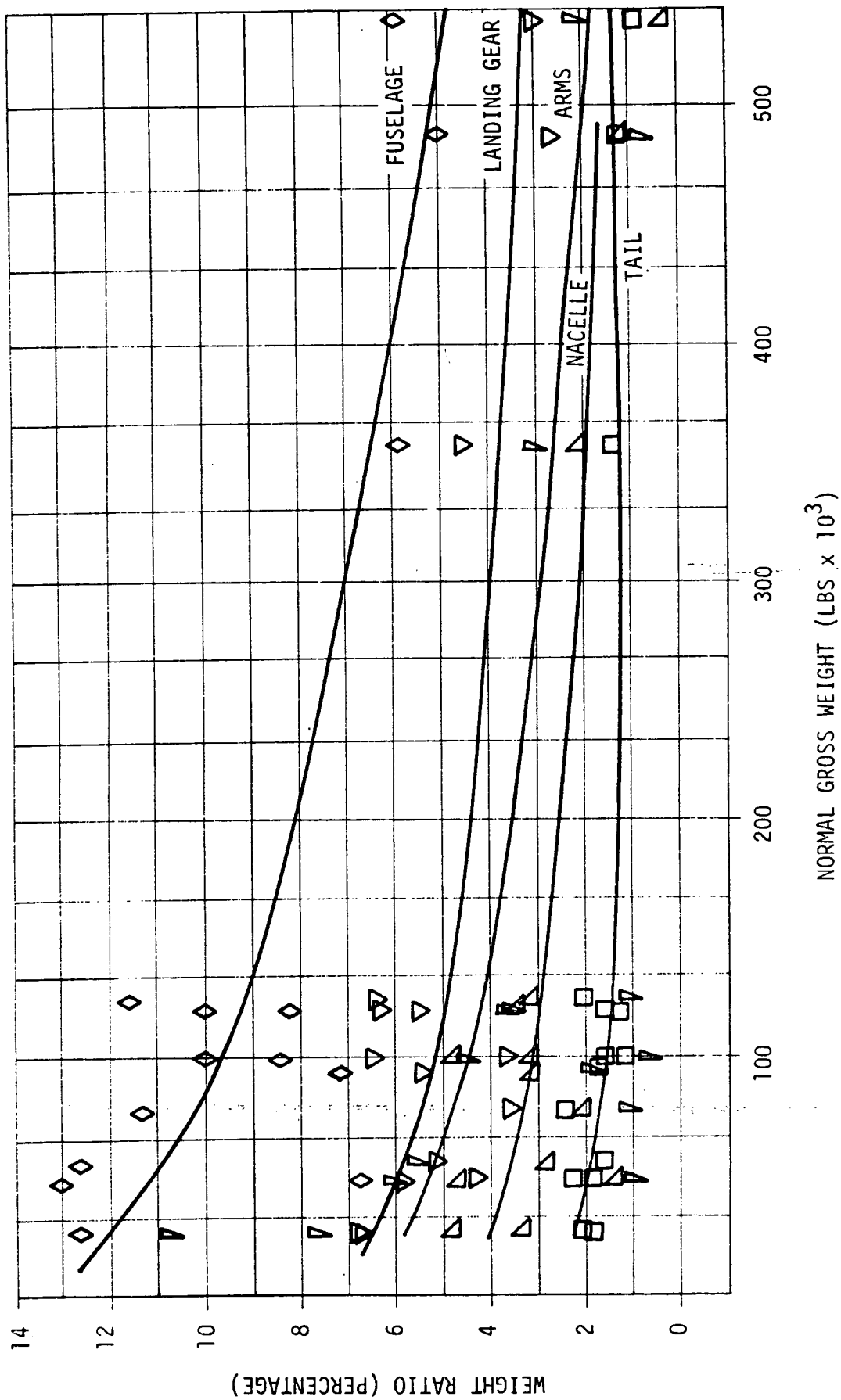


Figure A-3. WEIGHT ESTIMATION DATA - BOMBER AIRCRAFT

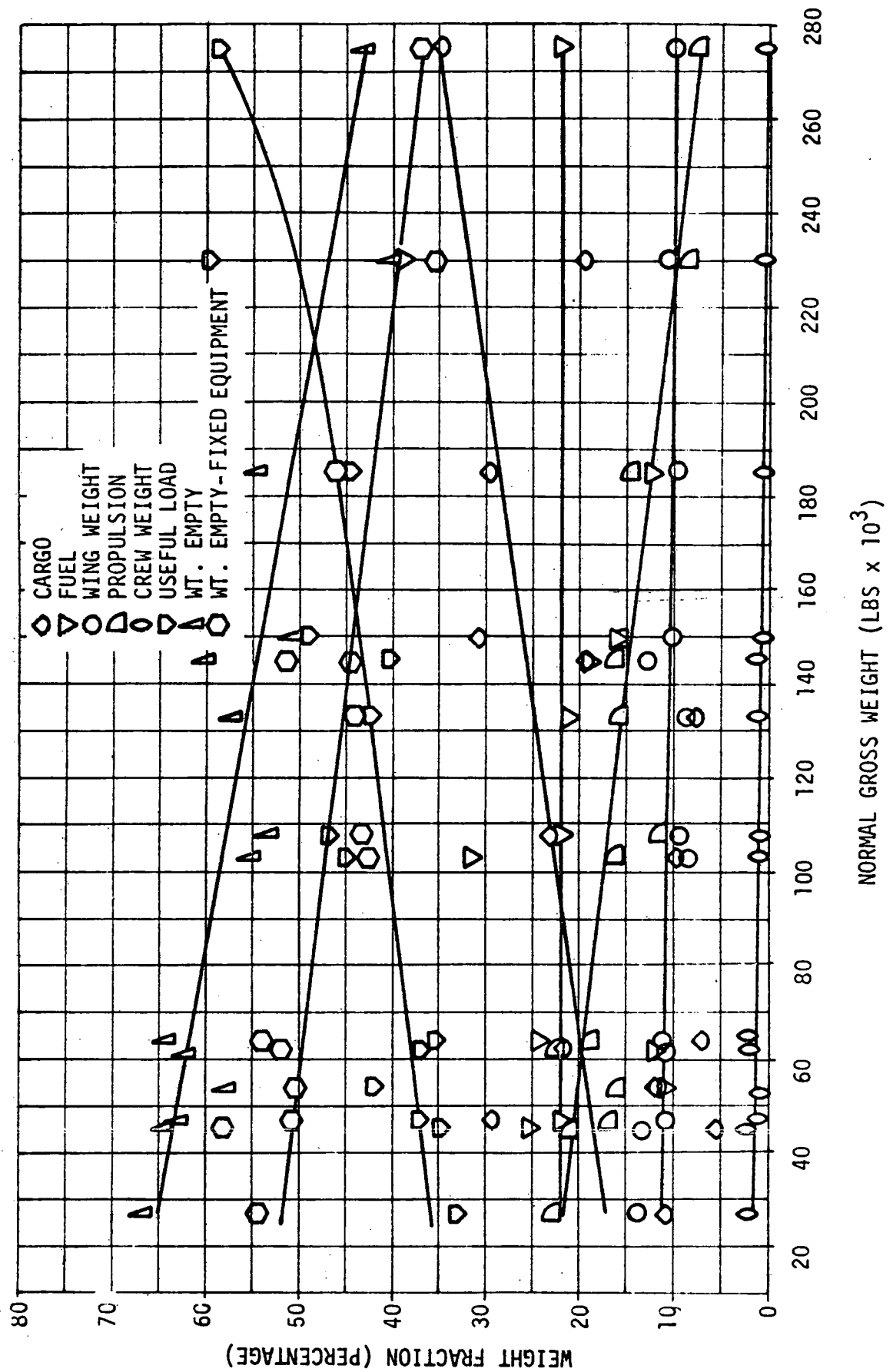


Figure A-4. WEIGHT ESTIMATION DATA - CARGO AIRCRAFT

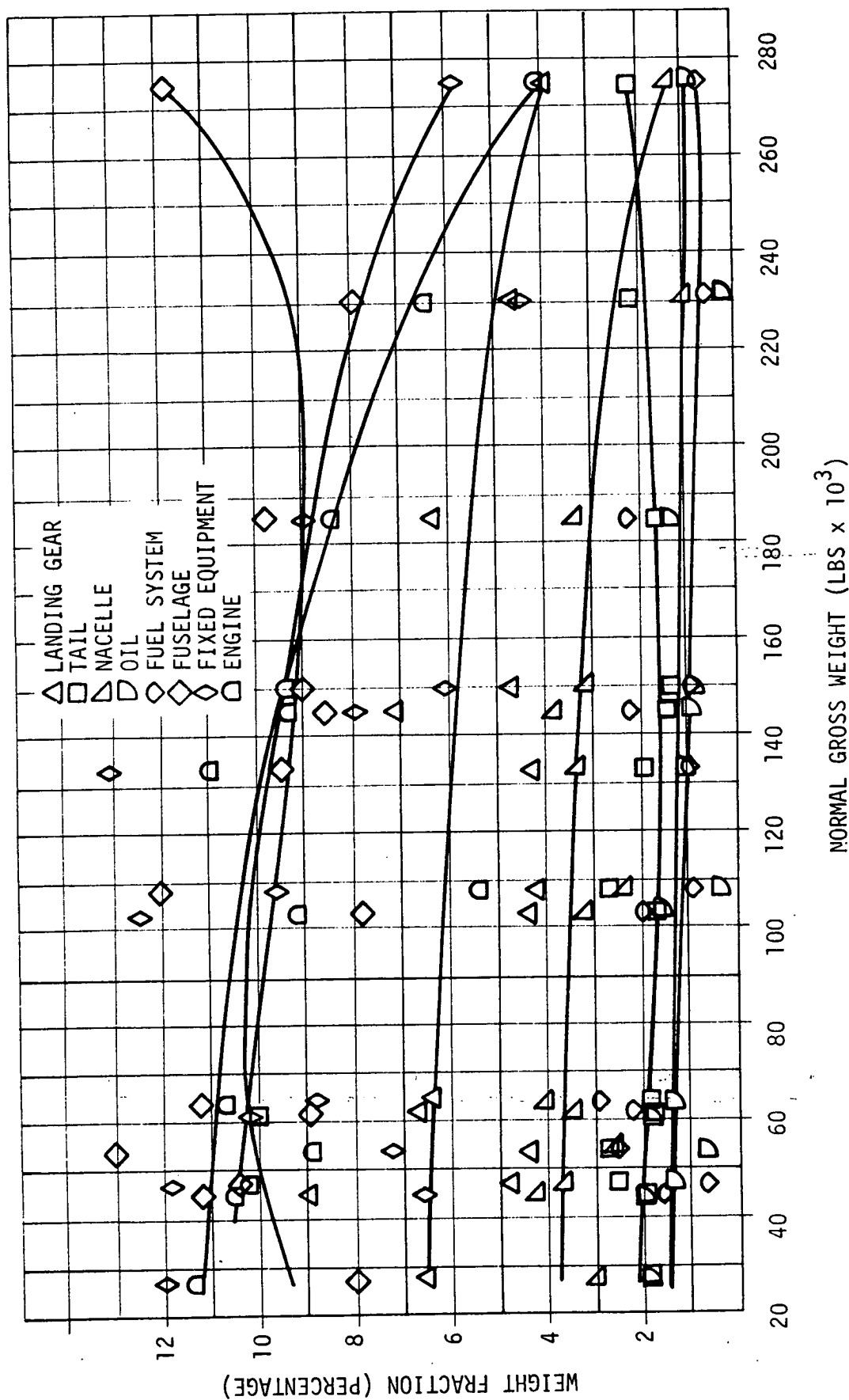


Figure A-5. WEIGHT ESTIMATION DATA - CARGO AIRCRAFT

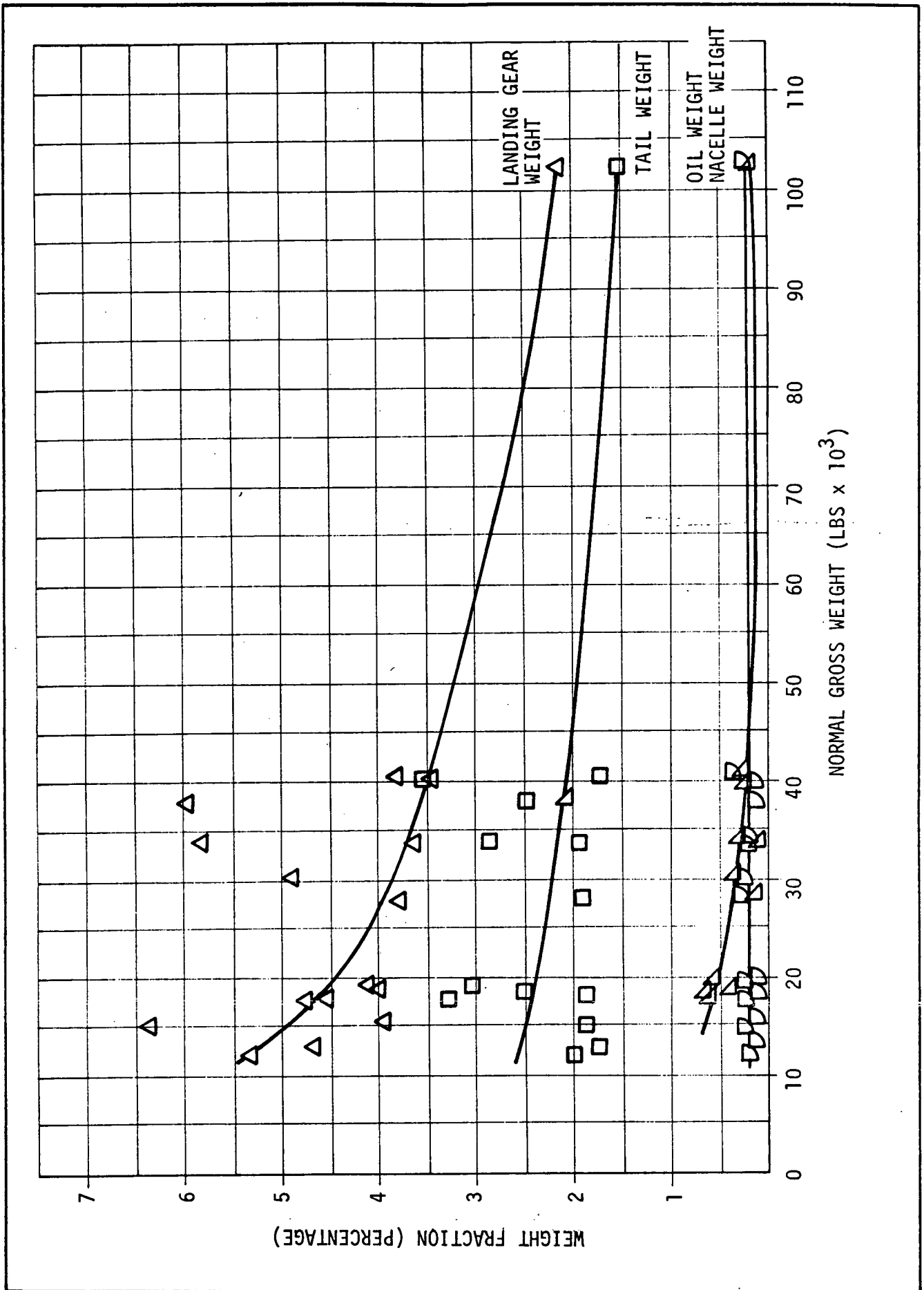


Figure A-6. WEIGHT ESTIMATION DATA - FIGHTER AIRCRAFT

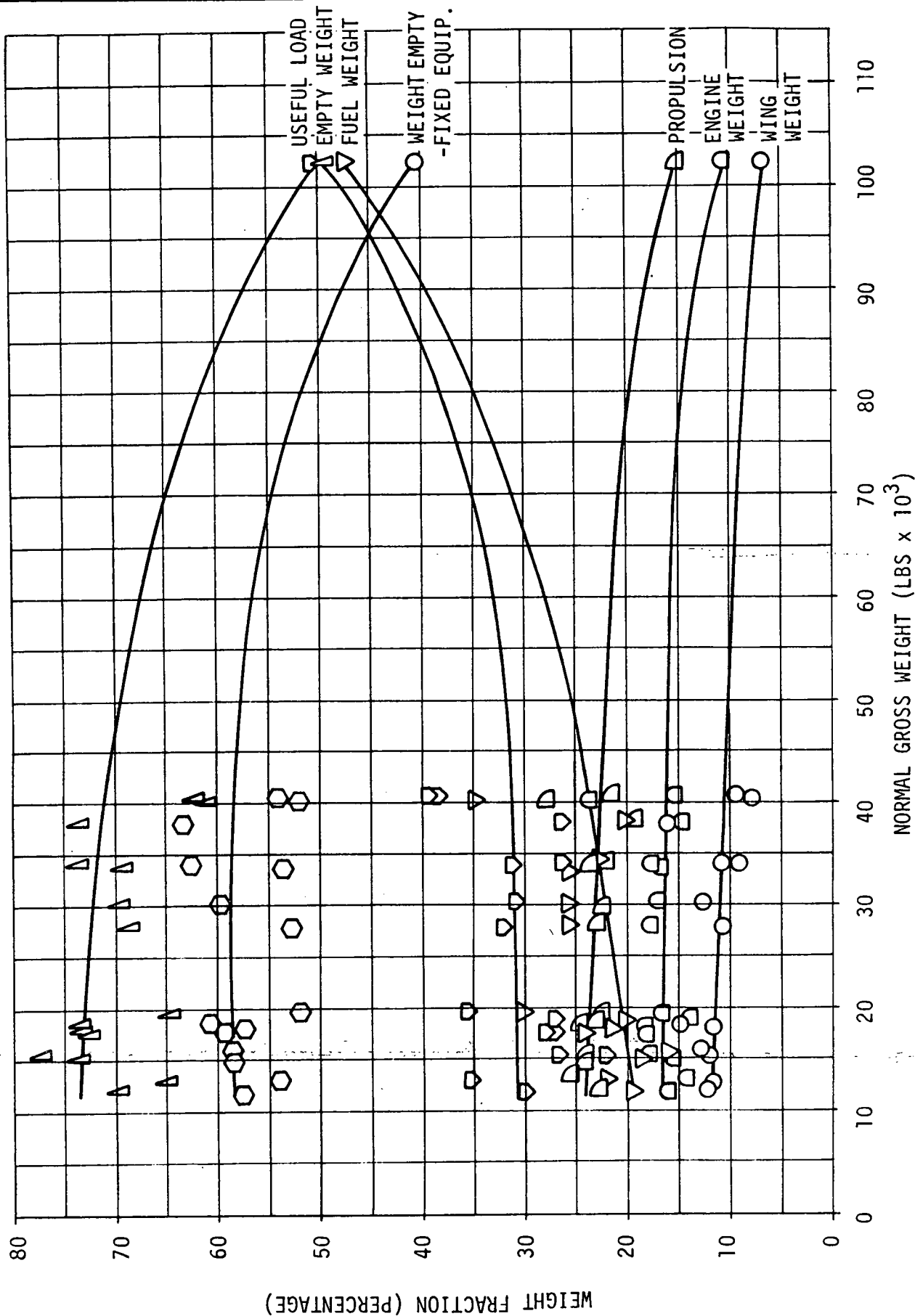


Figure A-7. WEIGHT ESTIMATION DATA - FIGHTER AIRCRAFT

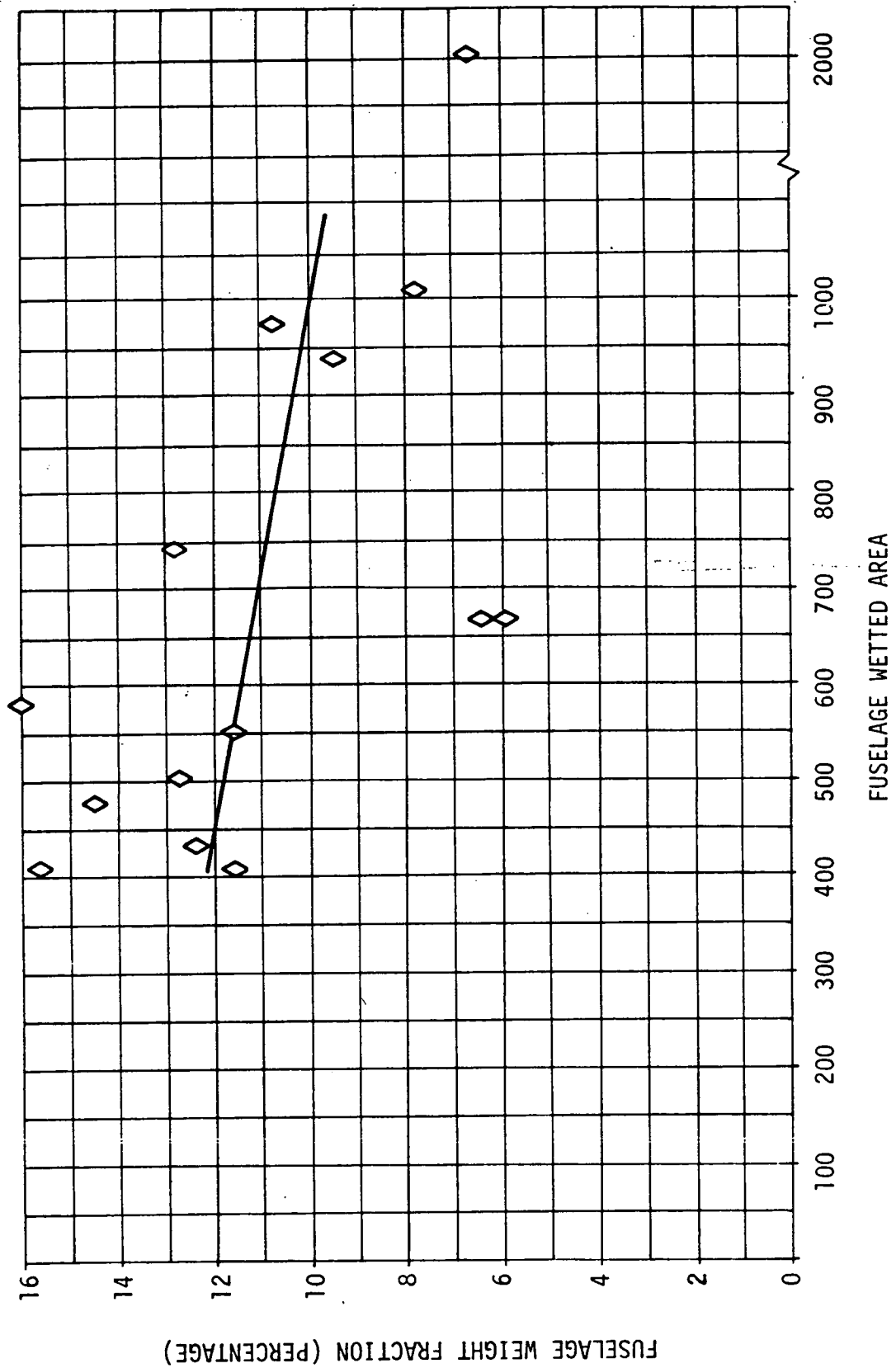


Figure A-8. WEIGHT ESTIMATION DATA - FIGHTER AIRCRAFT

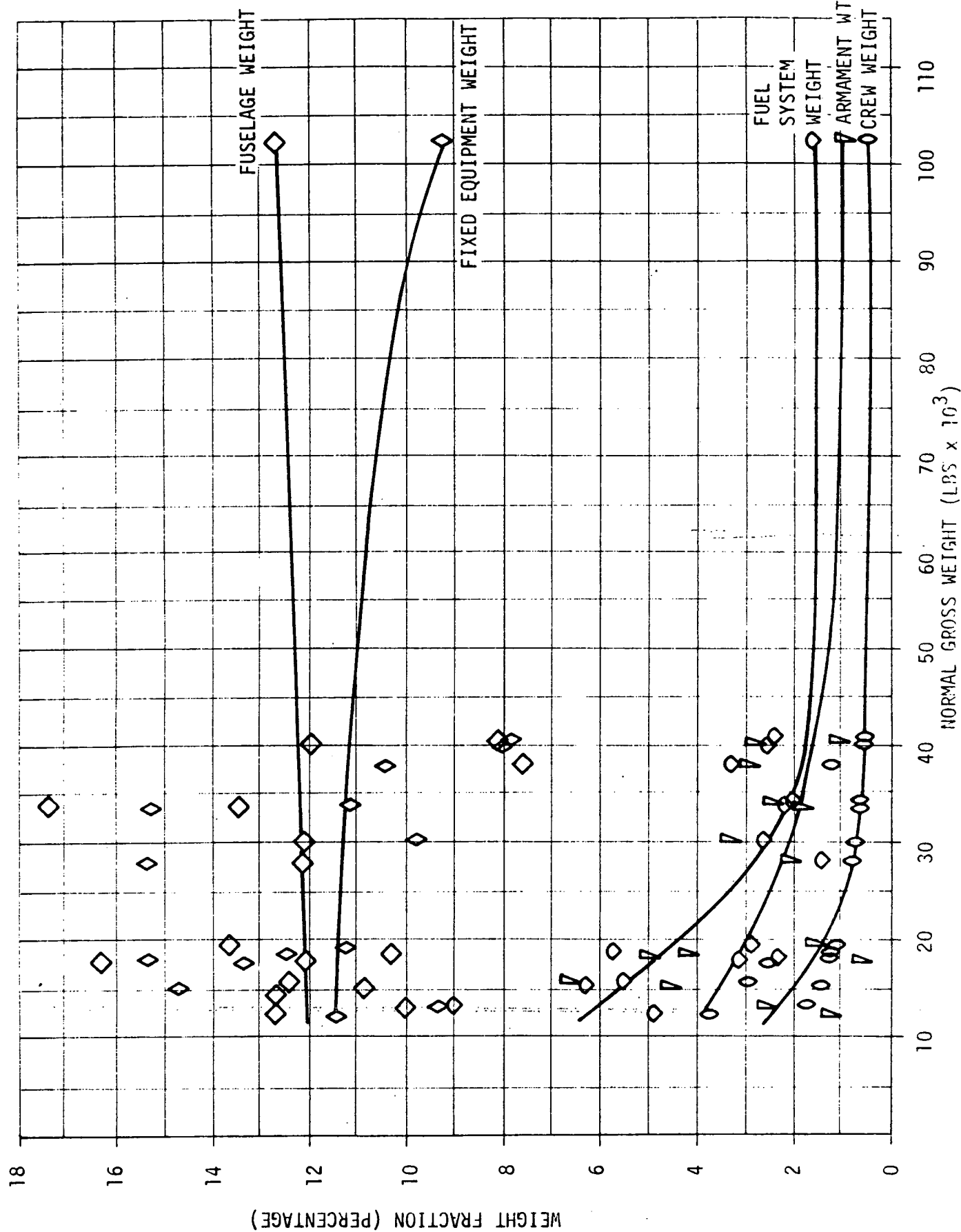


Figure A-9. WEIGHT ESTIMATION DATA - FIGHTER AIRCRAFT

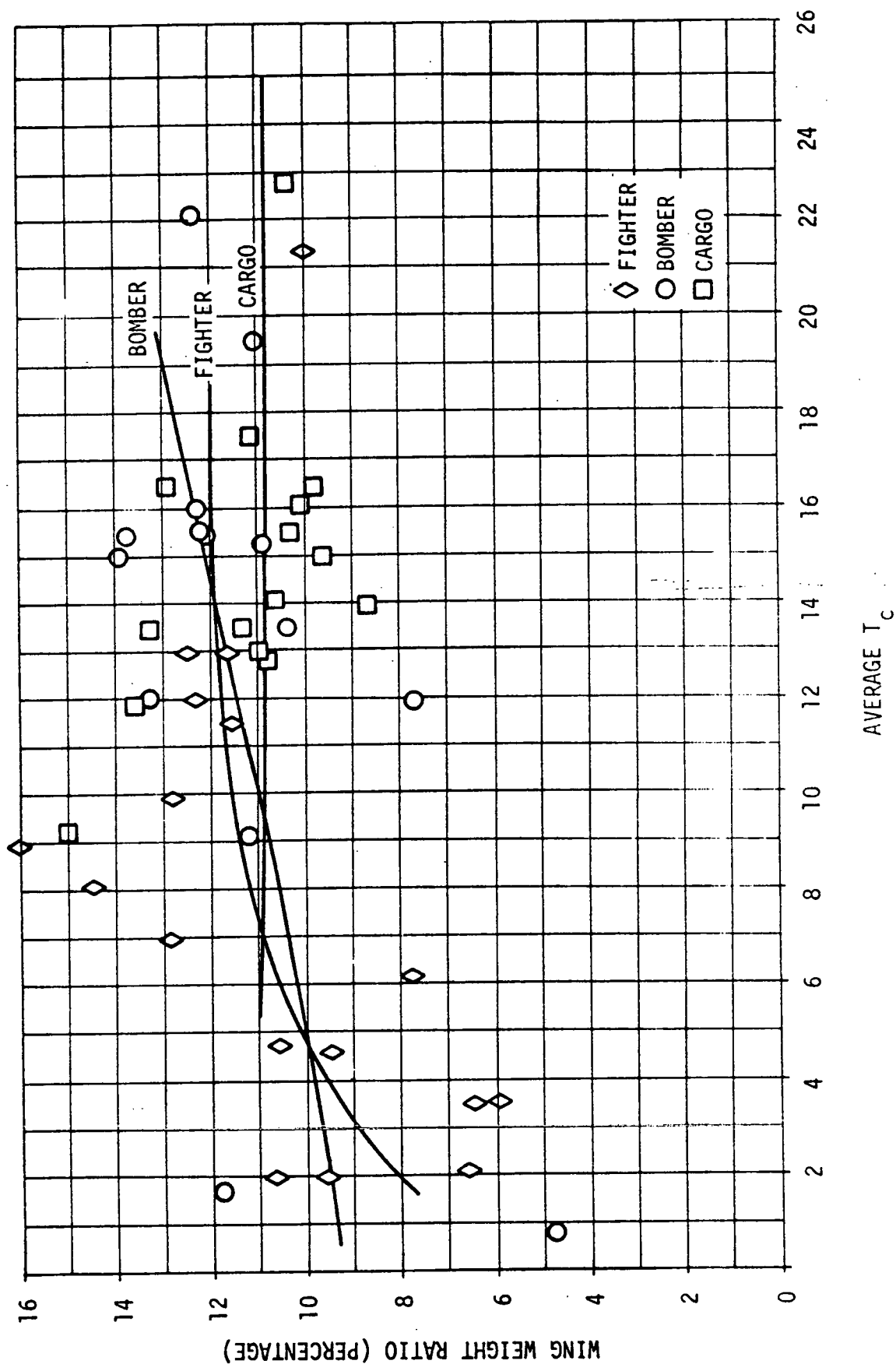


Figure A-10. WEIGHT ESTIMATION DATA

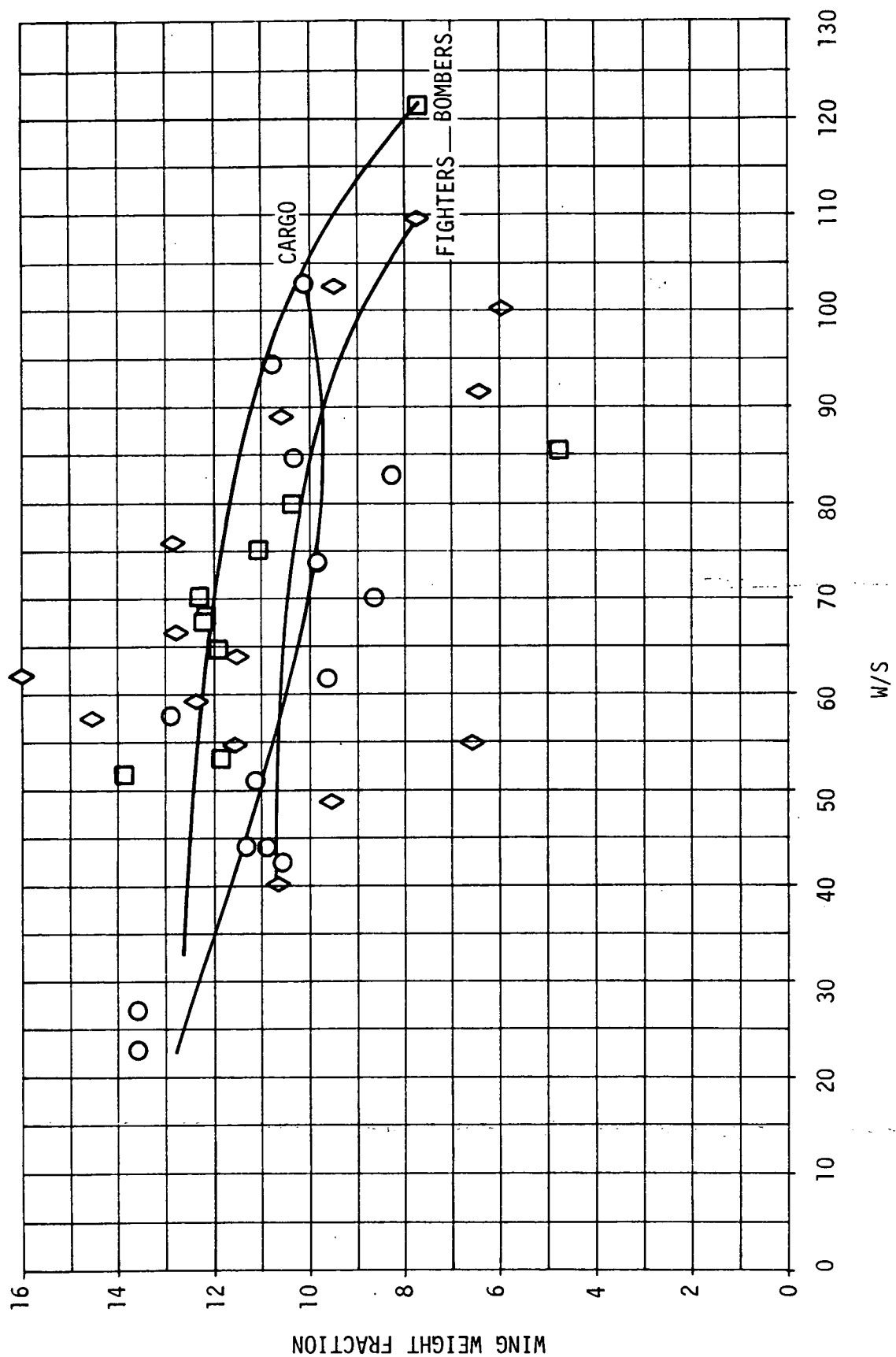


Figure A-11. WEIGHT ESTIMATION DATA

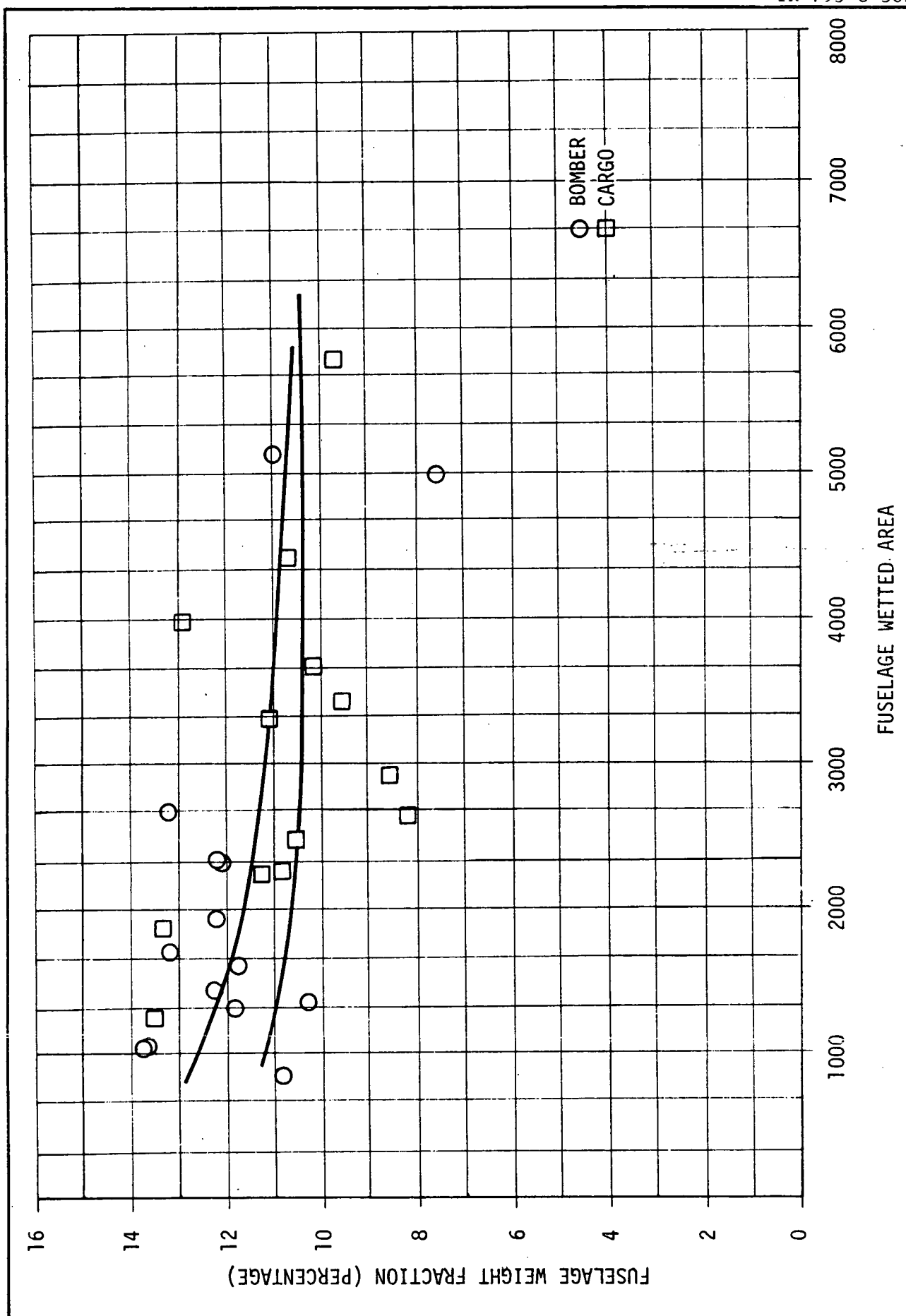


Figure A-12. WEIGHT ESTIMATION DATA

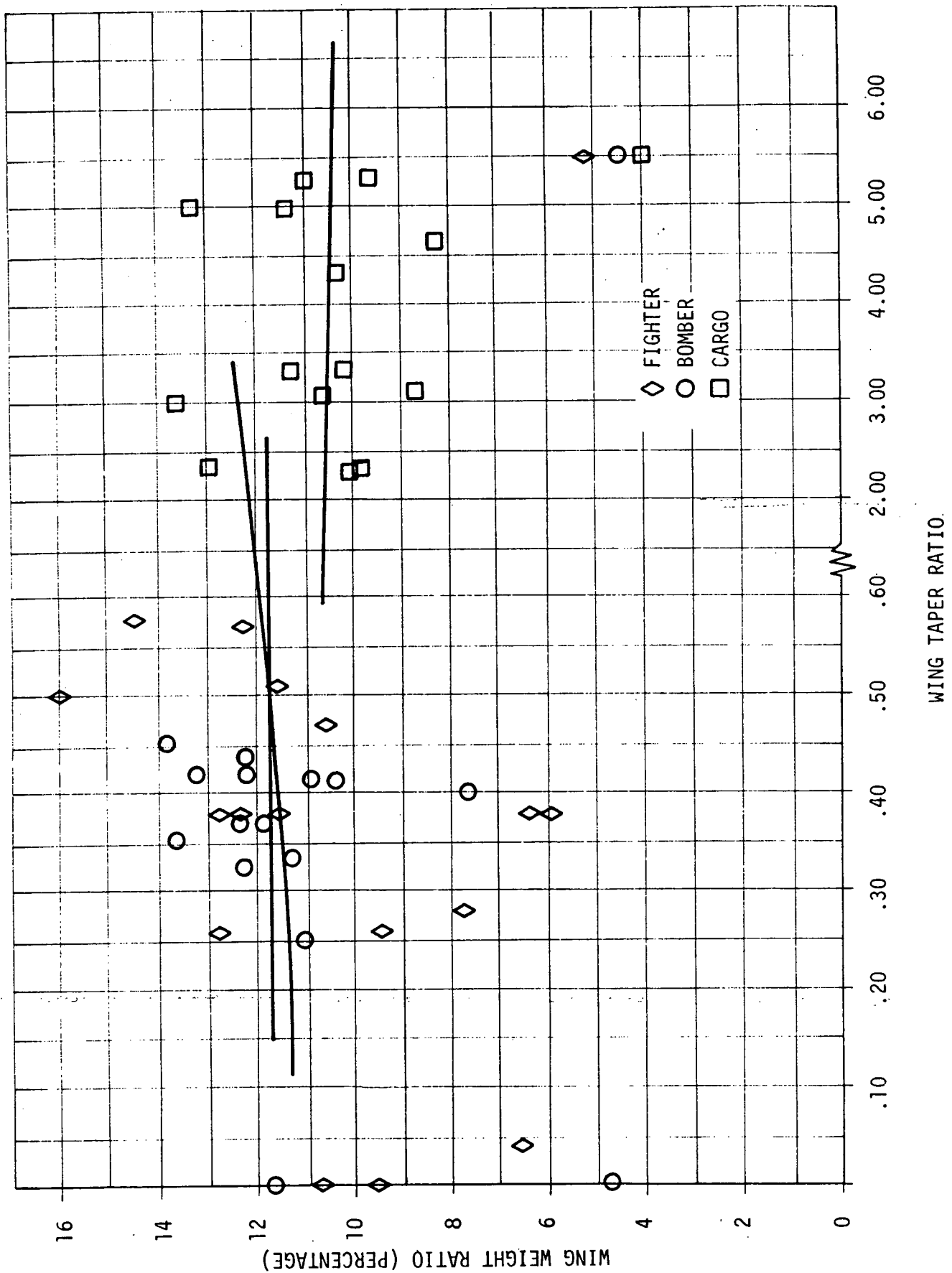


Figure A-13. WEIGHT ESTIMATION DATA

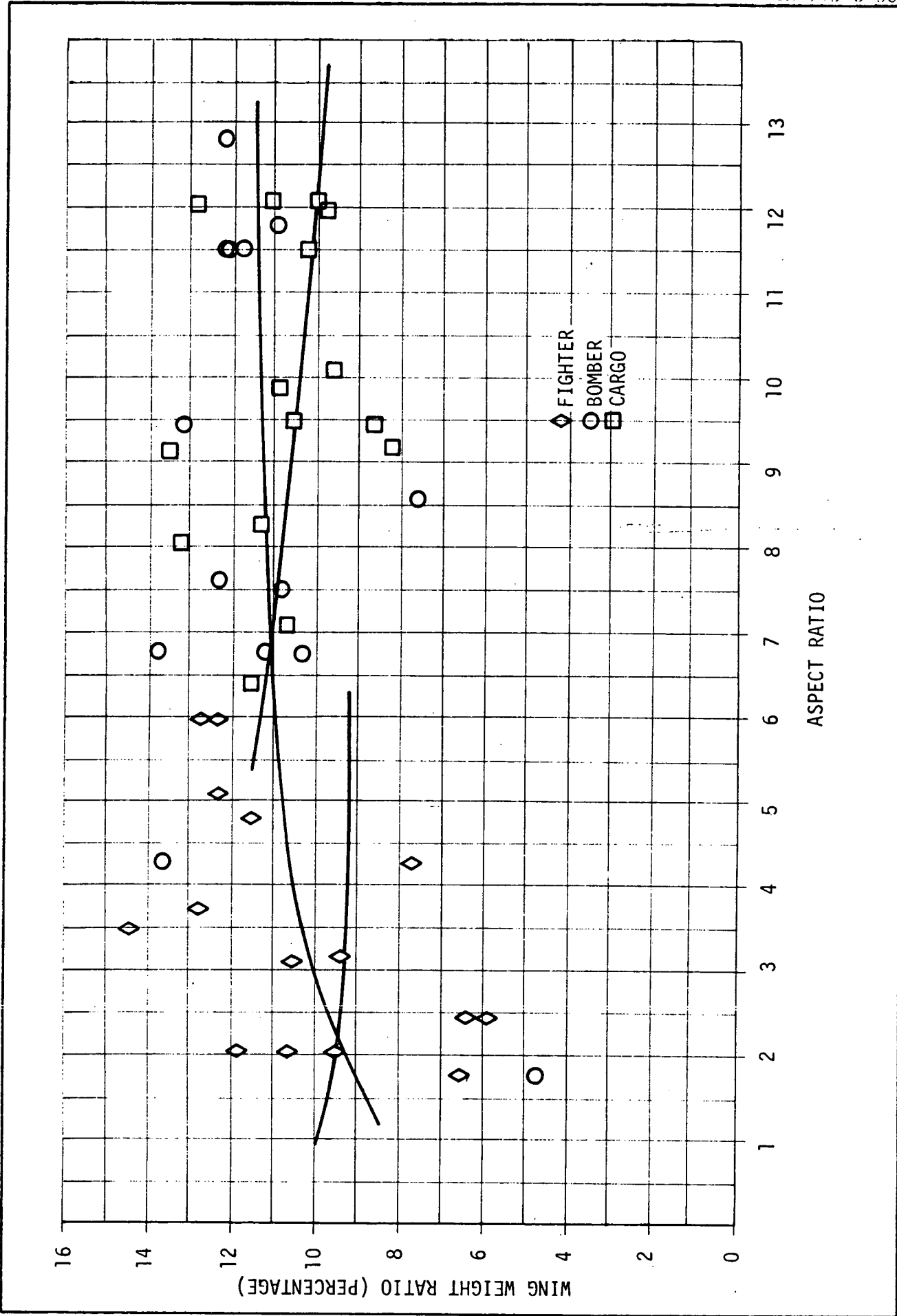


Figure A-14. WEIGHT ESTIMATION DATA

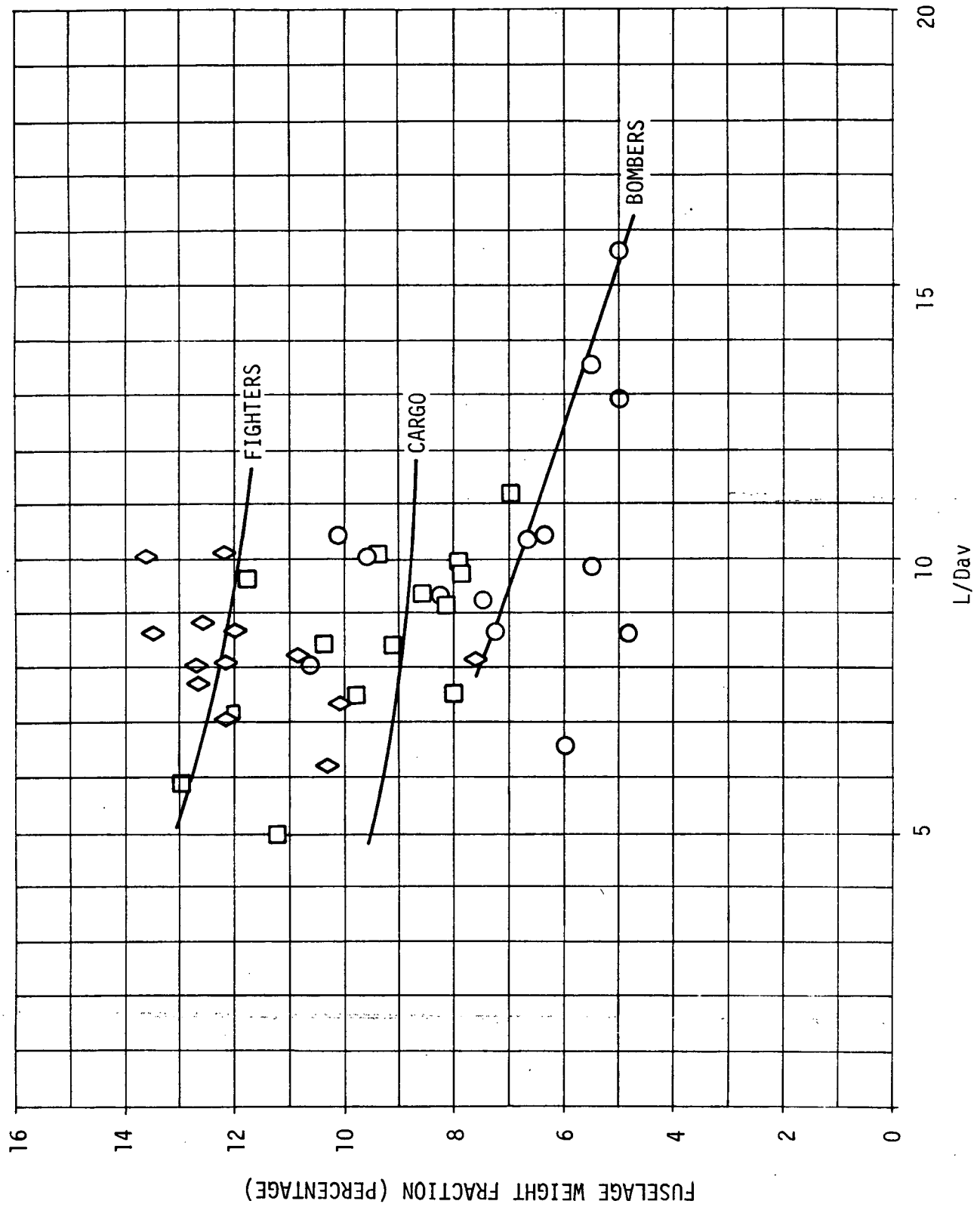


Figure A-15. WEIGHT ESTIMATION DATA

"Page missing from available version"

PAGES. 6-1 THRU 6-54

[illegible]

| | | | | | | | | | |
|-------------|--------------|------|-------------|------|-------------|------|--------------|------|--------------|
| TIM | 7.660000-01 | WHT | 2.44603E-05 | VFL | 9.39770E-03 | HANG | 1.15710E-02 | GAM | -3.10446E-00 |
| ALT | 2.27000E-02 | PHI | 9.01300E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.78745E-00 |
| SOS | 9.60115E-02 | LIFT | 0 | DRAG | 2.75477E-03 | QAIM | 9.57073E-00 | WFO | 2.16756E-07 |
| GR | 1.11000E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.97031E-01 | XLAT | 2.84504E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 6.01408E-04 | | | | |
| TIM | 7.70000E-01 | WHT | 2.44603E-05 | VFL | 9.39770E-03 | HANG | 1.18244E-02 | GAM | -3.17000E-00 |
| ALT | 2.24500E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.77250E-00 |
| SOS | 9.61710E-02 | LIFT | 0 | DRAG | 2.80000E-03 | QAIM | 9.74273E-00 | WFO | 2.21503E-07 |
| GR | 1.13500E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.90440E-01 | XLAT | 2.83481E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 6.47544E-04 | | | | |
| TIM | 7.80000E-01 | WHT | 2.44603E-05 | VFL | 9.39770E-03 | HANG | 1.19771E-02 | GAM | -3.43717E-00 |
| ALT | 2.25000E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.75704E-00 |
| SOS | 9.63371E-02 | LIFT | 0 | DRAG | 2.86042E-03 | QAIM | 1.00101E-01 | WFO | 2.26592E-07 |
| GR | 1.14240E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.95194E-01 | XLAT | 2.83459E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 6.96252E-04 | | | | |
| TIM | 7.90000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.21299E-02 | GAM | -3.50339E-00 |
| ALT | 2.25300E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.74001E-00 |
| SOS | 9.65110E-02 | LIFT | 0 | DRAG | 2.91799E-03 | QAIM | 1.00537E-01 | WFO | 2.30704E-07 |
| GR | 1.10120E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.89941E-01 | XLAT | 2.83437E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 7.48744E-04 | | | | |
| TIM | 8.00000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.22027E-02 | GAM | -3.76955E-00 |
| ALT | 2.24770E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.72392E-00 |
| SOS | 9.66020E-02 | LIFT | 0 | DRAG | 3.01562E-03 | QAIM | 1.00514E-01 | WFO | 2.37807E-07 |
| GR | 1.22200E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.89667E-01 | XLAT | 2.83415E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 8.03452E-04 | | | | |
| TIM | 8.10000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.24334E-02 | GAM | -3.95572E-00 |
| ALT | 2.24140E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.70616E-00 |
| SOS | 9.68020E-02 | LIFT | 0 | DRAG | 3.04408E-03 | QAIM | 1.00702E-01 | WFO | 2.44009E-07 |
| GR | 1.25490E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.89434E-01 | XLAT | 2.83354E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 8.61744E-04 | | | | |
| TIM | 8.20000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.25662E-02 | GAM | -4.10181E-00 |
| ALT | 2.23440E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.68820E-00 |
| SOS | 9.70770E-02 | LIFT | 0 | DRAG | 3.14044E-03 | QAIM | 1.01002E-01 | WFO | 2.57770E-07 |
| GR | 1.29031E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.89161E-01 | XLAT | 2.83371E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 9.22199E-04 | | | | |
| TIM | 8.30000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.27400E-02 | GAM | -4.26780E-00 |
| ALT | 2.22700E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.66939E-00 |
| SOS | 9.72840E-02 | LIFT | 0 | DRAG | 3.27599E-03 | QAIM | 1.01400E-01 | WFO | 2.57801E-07 |
| GR | 1.37759E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.88927E-01 | XLAT | 2.83340E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 9.87407E-04 | | | | |
| TIM | 8.40000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.28657E-02 | GAM | -4.43300E-00 |
| ALT | 2.22000E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.64937E-00 |
| SOS | 9.74970E-02 | LIFT | 0 | DRAG | 3.37744E-03 | QAIM | 1.017430E-01 | WFO | 2.55557E-07 |
| GR | 1.36756E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.88674E-01 | XLAT | 2.83326E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.05744E-03 | | | | |
| PMT RESUMED | | | | | | | | | |
| TIM | 8.50000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.31065E-02 | GAM | -4.59000E-00 |
| ALT | 2.21344E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.63044E-00 |
| SOS | 9.77110E-02 | LIFT | 0 | DRAG | 3.47744E-03 | QAIM | 1.02100E-01 | WFO | 2.73359E-07 |
| GR | 1.41014E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.88400E-01 | XLAT | 2.83374E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.13007E-03 | | | | |
| TIM | 8.60000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.31992E-02 | GAM | -4.76000E-00 |
| ALT | 2.20500E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.60932E-00 |
| SOS | 9.74460E-02 | LIFT | 0 | DRAG | 3.50000E-03 | QAIM | 1.02657E-01 | WFO | 2.71852E-07 |
| GR | 1.45544E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.88107E-01 | XLAT | 2.83220E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.20007E-03 | | | | |
| TIM | 8.70000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.33520E-02 | GAM | -4.93152E-00 |
| ALT | 2.19700E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.58912E-00 |
| SOS | 9.81000E-02 | LIFT | 0 | DRAG | 3.70000E-03 | QAIM | 1.02892E-01 | WFO | 2.70067E-07 |
| GR | 1.50375E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.87913E-01 | XLAT | 2.83260E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.26007E-03 | | | | |
| TIM | 8.80000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.35047E-02 | GAM | -5.10750E-00 |
| ALT | 2.18950E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.56636E-00 |
| SOS | 9.84251E-02 | LIFT | 0 | DRAG | 3.80000E-03 | QAIM | 1.03250E-01 | WFO | 3.00014E-07 |
| GR | 1.55510E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.87660E-01 | XLAT | 2.83237E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.30007E-03 | | | | |
| TIM | 8.90000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.36575E-02 | GAM | -5.28300E-00 |
| ALT | 2.18100E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.54400E-00 |
| SOS | 9.86750E-02 | LIFT | 0 | DRAG | 3.90000E-03 | QAIM | 1.03657E-01 | WFO | 3.10000E-07 |
| GR | 1.60075E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.87400E-01 | XLAT | 2.83213E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.34007E-03 | | | | |
| TIM | 9.00000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.38102E-02 | GAM | -5.45800E-00 |
| ALT | 2.17250E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.52170E-00 |
| SOS | 9.89330E-02 | LIFT | 0 | DRAG | 4.00000E-03 | QAIM | 1.04046E-01 | WFO | 3.17000E-07 |
| GR | 1.64725E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.87153E-01 | XLAT | 2.83193E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.38007E-03 | | | | |
| TIM | 9.10000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.39630E-02 | GAM | -5.63400E-00 |
| ALT | 2.16325E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.49726E-00 |
| SOS | 9.91000E-02 | LIFT | 0 | DRAG | 4.10000E-03 | QAIM | 1.04442E-01 | WFO | 3.24000E-07 |
| GR | 1.70000E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.86899E-01 | XLAT | 2.83171E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.42007E-03 | | | | |
| TIM | 9.20000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.41157E-02 | GAM | -5.81000E-00 |
| ALT | 2.15350E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.47393E-00 |
| SOS | 9.94719E-02 | LIFT | 0 | DRAG | 4.20000E-03 | QAIM | 1.04840E-01 | WFO | 3.31000E-07 |
| GR | 1.70526E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.86640E-01 | XLAT | 2.83149E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.46007E-03 | | | | |
| TIM | 9.30000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.42684E-02 | GAM | -5.98500E-00 |
| ALT | 2.14430E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.44955E-00 |
| SOS | 9.97510E-02 | LIFT | 0 | DRAG | 4.30000E-03 | QAIM | 1.05234E-01 | WFO | 3.38000E-07 |
| GR | 1.80507E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.86393E-01 | XLAT | 2.83127E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 1.50007E-03 | | | | |
| TIM | 9.40000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.44212E-02 | GAM | -6.16000E-00 |
| ALT | 2.13447E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.42400E-00 |
| SOS | 1.00000E-03 | LIFT | 0 | DRAG | 4.40000E-03 | QAIM | 1.05630E-01 | WFO | 3.45000E-07 |
| GR | 1.94927E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.86139E-01 | XLAT | 2.83104E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 2.05007E-03 | | | | |
| TIM | 9.50000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.45739E-02 | GAM | -6.33500E-00 |
| ALT | 2.12432E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.39954E-00 |
| SOS | 1.01334E-03 | LIFT | 0 | DRAG | 4.50000E-03 | QAIM | 1.06020E-01 | WFO | 3.52000E-07 |
| GR | 2.01014E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.85886E-01 | XLAT | 2.83082E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 2.59007E-03 | | | | |
| TIM | 9.60000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.47266E-02 | GAM | -6.51000E-00 |
| ALT | 2.11417E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.37400E-00 |
| SOS | 1.02614E-03 | LIFT | 0 | DRAG | 4.60000E-03 | QAIM | 1.06410E-01 | WFO | 3.59000E-07 |
| GR | 2.10000E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.85633E-01 | XLAT | 2.83059E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 3.13007E-03 | | | | |
| TIM | 9.70000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.48793E-02 | GAM | -6.68500E-00 |
| ALT | 2.10400E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.34854E-00 |
| SOS | 1.03900E-03 | LIFT | 0 | DRAG | 4.70000E-03 | QAIM | 1.06793E-01 | WFO | 3.66000E-07 |
| GR | 2.19000E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.85380E-01 | XLAT | 2.83036E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 3.67007E-03 | | | | |
| TIM | 9.80000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.50320E-02 | GAM | -6.86000E-00 |
| ALT | 2.09383E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.32300E-00 |
| SOS | 1.05183E-03 | LIFT | 0 | DRAG | 4.80000E-03 | QAIM | 1.07176E-01 | WFO | 3.73000E-07 |
| GR | 2.28000E-02 | ZDOT | 0 | ZH | 2.76041E-02 | XLON | 7.85127E-01 | XLAT | 2.83013E-01 |
| GAMC | -9.70000E-00 | THA | 0 | GV | 4.21007E-03 | | | | |
| TIM | 9.90000E-01 | WHT | 2.44603E-05 | VFL | 9.40000E-03 | HANG | 1.51847E-02 | GAM | -7.03500E-00 |
| ALT | 2.08366E-02 | PHI | 9.50000E-01 | Z | 9.30000E-01 | ALPH | 0 | MACH | 9.29754E-00 |
| SOS | 1.06463E-03 | | | | | | | | |

6-57

GAMC READ-ON

| | | | | | | | | | | |
|------|--------------|------|-------------|-------------|--------------|-------------|-------------|--------------|--------------|--------------|
| TIM | 1.170000 | 02 | WHT | 2.46603E 05 | VEL | 9.49000E 03 | RANG | 1.79329E 02 | GAM | -9.87224E 00 |
| ALT | 1.83224E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.74887E 00 | |
| SOS | 1.00477E 03 | LIFT | 0 | DRAG | 1.43423E 04 | QATH | 4.87935E 01 | MPO | 1.08346E -06 | |
| GR | 5.81596E -02 | ZUCT | 0 | ZR | 2.78000E 02 | XLON | 7.80313E 01 | XLAT | 2.87595E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 9.97106E -03 | | | | | |
| TIM | 1.190000 | 02 | WHT | 2.46603E 05 | VEL | 9.49315E 03 | RANG | 1.80051E 02 | GAM | -1.00356E 01 |
| ALT | 1.81555E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.71012E 00 | |
| SOS | 1.00917E 03 | LIFT | 0 | DRAG | 1.51100E 04 | QATH | 5.14993E 01 | MPO | 1.14288E -06 | |
| GR | 6.14356E -02 | ZUCT | 0 | ZR | 2.78000E 02 | XLON | 7.80000E 01 | XLAT | 2.87373E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 1.07000E -02 | | | | | |
| TIM | 1.190000 | 02 | WHT | 2.46603E 05 | VEL | 9.49000E 03 | RANG | 1.80370E 02 | GAM | -1.01988E 01 |
| ALT | 1.79015E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.68316E 00 | |
| SOS | 1.00936E 03 | LIFT | 0 | DRAG | 1.60100E 04 | QATH | 5.43794E 01 | MPO | 1.20000E -06 | |
| GR | 6.49275E -02 | ZUCT | 0 | ZR | 2.78000E 02 | XLON | 7.79807E 01 | XLAT | 2.82550E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 1.14000E -02 | | | | | |
| TIM | 1.200000 | 02 | WHT | 2.46603E 05 | VEL | 9.49600E 03 | RANG | 1.80390E 02 | GAM | -1.03620E 01 |
| ALT | 1.77220E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.65000E 00 | |
| SOS | 1.00914E 03 | LIFT | 0 | DRAG | 1.69240E 04 | QATH | 5.74452E 01 | MPO | 1.27332E -06 | |
| GR | 6.86444E -02 | ZUCT | 0 | ZR | 2.78000E 02 | XLON | 7.79554E 01 | XLAT | 2.82528E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 1.23400E -02 | | | | | |
| TIM | 1.210000 | 02 | WHT | 2.46603E 05 | VEL | 9.50161E 03 | RANG | 1.805420E 02 | GAM | -1.05251E 01 |
| ALT | 1.76495E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.61666E 00 | |
| SOS | 1.10270E 03 | LIFT | 0 | DRAG | 1.79000E 04 | QATH | 6.07000E 01 | MPO | 1.34480E -06 | |
| GR | 7.26087E -02 | ZUCT | 0 | ZR | 2.78100E 02 | XLON | 7.79301E 01 | XLAT | 2.82598E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 1.32600E -02 | | | | | |
| TIM | 1.220000 | 02 | WHT | 2.46603E 05 | VEL | 9.50000E 03 | RANG | 1.80950E 02 | GAM | -1.06800E 01 |
| ALT | 1.74749E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.59532E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 1.90000E 04 | QATH | 6.43704E 01 | MPO | 1.42521E -06 | |
| GR | 7.78544E -02 | ZUCT | 0 | ZR | 2.78100E 02 | XLON | 7.79348E 01 | XLAT | 2.82454E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 1.42000E -02 | | | | | |
| TIM | 1.230000 | 02 | WHT | 2.46603E 05 | VEL | 9.50000E 03 | RANG | 1.80474E 02 | GAM | -1.08500E 01 |
| ALT | 1.72070E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.57760E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 2.00000E 04 | QATH | 6.80000E 01 | MPO | 1.51990E -06 | |
| GR | 8.22647E -02 | ZUCT | 0 | ZR | 2.78000E 02 | XLON | 7.78995E 01 | XLAT | 2.82469E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 1.54000E -02 | | | | | |
| TIM | 1.240000 | 02 | WHT | 2.46603E 05 | VEL | 9.50000E 03 | RANG | 1.80990E 02 | GAM | -1.10132E 01 |
| ALT | 1.71170E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.55940E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 2.16000E 04 | QATH | 7.31030E 01 | MPO | 1.60000E -06 | |
| GR | 8.78626E -02 | ZUCT | 0 | ZR | 2.78100E 02 | XLON | 7.78942E 01 | XLAT | 2.82440E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 1.67000E -02 | | | | | |
| TIM | 1.250000 | 02 | WHT | 2.46603E 05 | VEL | 9.51100E 03 | RANG | 1.91222E 02 | GAM | -1.11764E 01 |
| ALT | 1.69330E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.60204E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 2.31000E 04 | QATH | 7.84345E 01 | MPO | 1.73345E -06 | |
| GR | 9.33000E -02 | ZUCT | 0 | ZR | 2.78000E 02 | XLON | 7.78200E 01 | XLAT | 2.82478E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 1.82000E -02 | | | | | |
| TIM | 1.260000 | 02 | WHT | 2.46603E 05 | VEL | 9.51300E 03 | RANG | 1.93040E 02 | GAM | -1.13341E 01 |
| ALT | 1.67482E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.60407E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 2.47000E 04 | QATH | 8.39367E 01 | MPO | 1.85404E -06 | |
| GR | 1.00514E -01 | ZUCT | 0 | ZR | 2.78000E 02 | XLON | 7.78037E 01 | XLAT | 2.82396E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 1.97000E -02 | | | | | |
| TIM | 1.270000 | 02 | WHT | 2.46603E 05 | VEL | 9.51000E 03 | RANG | 1.94000E 02 | GAM | -1.15010E 01 |
| ALT | 1.65590E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.60590E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 2.65490E 04 | QATH | 8.99100E 01 | MPO | 1.98577E -06 | |
| GR | 1.07642E -01 | ZUCT | 0 | ZR | 2.78200E 02 | XLON | 7.77840E 01 | XLAT | 2.82373E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 2.14000E -02 | | | | | |
| TIM | 1.280000 | 02 | WHT | 2.46603E 05 | VEL | 9.51000E 03 | RANG | 1.94090E 02 | GAM | -1.16641E 01 |
| ALT | 1.63670E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.60774E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 2.84000E 04 | QATH | 9.64020E 01 | MPO | 2.12000E -06 | |
| GR | 1.15430E -01 | ZUCT | 0 | ZR | 2.78300E 02 | XLON | 7.77532E 01 | XLAT | 2.82351E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 2.33600E -02 | | | | | |
| TIM | 1.290000 | 02 | WHT | 2.46603E 05 | VEL | 9.51000E 03 | RANG | 1.97012E 02 | GAM | -1.17260E 01 |
| ALT | 1.61750E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.60935E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 3.05400E 04 | QATH | 1.03460E 02 | MPO | 2.26330E -06 | |
| GR | 1.23875E -01 | ZUCT | 0 | ZR | 2.78300E 02 | XLON | 7.77219E 01 | XLAT | 2.82320E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 2.53000E -02 | | | | | |
| TIM | 1.300000 | 02 | WHT | 2.46603E 05 | VEL | 9.52100E 03 | RANG | 1.99134E 02 | GAM | -1.19888E 01 |
| ALT | 1.59750E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.61074E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 3.28100E 04 | QATH | 1.11330E 02 | MPO | 2.40180E -06 | |
| GR | 1.33033E -01 | ZUCT | 0 | ZR | 2.78300E 02 | XLON | 7.77027E 01 | XLAT | 2.82301E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 2.76300E -02 | | | | | |
| TIM | 1.310000 | 02 | WHT | 2.46603E 05 | VEL | 9.52000E 03 | RANG | 2.00050E 02 | GAM | -1.21510E 01 |
| ALT | 1.57740E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.61194E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 3.52000E 04 | QATH | 1.19490E 02 | MPO | 2.60550E -06 | |
| GR | 1.43627E -01 | ZUCT | 0 | ZR | 2.78300E 02 | XLON | 7.76774E 01 | XLAT | 2.82280E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 3.01100E -02 | | | | | |
| TIM | 1.320000 | 02 | WHT | 2.46603E 05 | VEL | 9.52000E 03 | RANG | 2.02170E 02 | GAM | -1.23132E 01 |
| ALT | 1.55770E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.61290E 00 | |
| SOS | 1.10575E 03 | LIFT | 0 | DRAG | 3.79600E 04 | QATH | 1.28000E 02 | MPO | 2.83500E -06 | |
| GR | 1.53947E -01 | ZUCT | 0 | ZR | 2.78400E 02 | XLON | 7.76522E 01 | XLAT | 2.82263E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 3.28300E -02 | | | | | |
| TIM | 1.330000 | 02 | WHT | 2.46603E 05 | VEL | 9.52440E 03 | RANG | 2.03090E 02 | GAM | -1.24753E 01 |
| ALT | 1.53732E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.61360E 00 | |
| SOS | 1.10229E 03 | LIFT | 0 | DRAG | 4.13100E 04 | QATH | 1.39270E 02 | MPO | 3.07000E -06 | |
| GR | 1.66730E -01 | ZUCT | 0 | ZR | 2.78400E 02 | XLON | 7.76270E 01 | XLAT | 2.82241E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 3.60100E -02 | | | | | |
| TIM | 1.340000 | 02 | WHT | 2.46603E 05 | VEL | 9.52400E 03 | RANG | 2.05214E 02 | GAM | -1.26374E 01 |
| ALT | 1.51662E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.66506E 00 | |
| SOS | 1.09903E 03 | LIFT | 0 | DRAG | 4.46400E 04 | QATH | 1.51260E 02 | MPO | 3.33460E -06 | |
| GR | 1.80070E -01 | ZUCT | 0 | ZR | 2.78400E 02 | XLON | 7.76018E 01 | XLAT | 2.82219E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 3.95900E -02 | | | | | |
| TIM | 1.350000 | 02 | WHT | 2.46603E 05 | VEL | 9.52400E 03 | RANG | 2.06732E 02 | GAM | -1.27995E 01 |
| ALT | 1.49565E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.69454E 00 | |
| SOS | 1.09550E 03 | LIFT | 0 | DRAG | 4.85000E 04 | QATH | 1.64537E 02 | MPO | 3.62720E -06 | |
| GR | 1.96712E -01 | ZUCT | 0 | ZR | 2.78400E 02 | XLON | 7.75760E 01 | XLAT | 2.82197E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 4.35744E -02 | | | | | |
| TIM | 1.360000 | 02 | WHT | 2.46603E 05 | VEL | 9.52400E 03 | RANG | 2.08249E 02 | GAM | -1.29613E 01 |
| ALT | 1.47441E 05 | PHI | 4.50000E 01 | Z | 9.50000E 01 | ALPH | 0 | MACH | 8.72429E 00 | |
| SOS | 1.10172E 03 | LIFT | 0 | DRAG | 5.28000E 04 | QATH | 1.79254E 02 | MPO | 3.95201E -06 | |
| GR | 2.14145E -01 | ZUCT | 0 | ZR | 2.78500E 02 | XLON | 7.75514E 01 | XLAT | 2.82175E 01 | |
| GAMC | -9.70000E 00 | THN | 0 | GV | 4.80314E -02 | | | | | |
| TIM | 1.370000 | 02 | WHT | 2.46603E 05 | VEL | 9.52400E 03 | RANG | 2.09765E 02 | GAM | -1.31234E 01 |

| | | | | | | | | | |
|------|--------------|------|-------------|------|-------------|------|-------------|------|--------------|
| ALT | 1.45292E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 8.75424E-00 |
| SOS | 1.04787E-03 | LIFT | 0 | DRAG | 5.7571E-04 | QATM | 1.95595E-02 | HPO | 4.31314E-06 |
| GR | 2.33455E-01 | ZDOT | 0 | ZR | 2.78535E-02 | XLON | 7.75263E-01 | XLAT | 2.82153E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 5.30178E-02 | | | | |
| TIM | 1.36000E-02 | WHT | 2.46603E-05 | VEL | 9.52197E-03 | RANG | 2.11281E-02 | GAM | -1.32854E-01 |
| ALT | 1.33137E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 8.78439E-00 |
| SOS | 1.08392E-03 | LIFT | 0 | DRAG | 6.28277E-04 | QATM | 2.13764E-02 | HPO | 4.71932E-06 |
| GR | 2.54976E-01 | ZDOT | 0 | ZR | 2.78561E-02 | XLON | 7.75011E-01 | XLAT | 2.82131E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 5.85940E-02 | | | | |
| TIM | 1.36000E-02 | WHT | 2.46603E-05 | VEL | 9.51979E-03 | RANG | 2.12795E-02 | GAM | -1.34474E-01 |
| ALT | 1.40916E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 8.81465E-00 |
| SOS | 1.04000E-03 | LIFT | 0 | DRAG | 6.87748E-04 | QATM | 2.33994E-02 | HPO | 5.16394E-06 |
| GR | 2.78894E-01 | ZDOT | 0 | ZR | 2.7857E-02 | XLON | 7.74760E-01 | XLAT | 2.82109E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 6.48562E-02 | | | | |
| TIM | 1.40000E-02 | WHT | 2.46603E-05 | VEL | 9.51687E-03 | RANG | 2.14308E-02 | GAM | -1.36094E-01 |
| ALT | 1.38289E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 8.84496E-00 |
| SOS | 1.07597E-03 | LIFT | 0 | DRAG | 7.33455E-04 | QATM | 2.56591E-02 | HPO | 5.66520E-06 |
| GR | 3.05533E-01 | ZDOT | 0 | ZR | 2.78613E-02 | XLON | 7.74509E-01 | XLAT | 2.82087E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 7.18091E-02 | | | | |
| TIM | 1.41000E-02 | WHT | 2.46603E-05 | VEL | 9.51313E-03 | RANG | 2.15820E-02 | GAM | -1.37714E-01 |
| ALT | 1.34437E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 8.87524E-00 |
| SOS | 1.07187E-03 | LIFT | 0 | DRAG | 8.26700E-04 | QATM | 2.81735E-02 | HPO | 6.22622E-06 |
| GR | 3.35262E-01 | ZDOT | 0 | ZR | 2.78648E-02 | XLON | 7.74258E-01 | XLAT | 2.82065E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 7.98085E-02 | | | | |
| TIM | 1.42000E-02 | WHT | 2.46603E-05 | VEL | 9.50846E-03 | RANG | 2.17330E-02 | GAM | -1.39334E-01 |
| ALT | 1.34160E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 8.90541E-00 |
| SOS | 1.06772E-03 | LIFT | 0 | DRAG | 9.08479E-04 | QATM | 3.00895E-02 | HPO | 6.85522E-06 |
| GR | 3.64478E-01 | ZDOT | 0 | ZR | 2.78664E-02 | XLON | 7.74006E-01 | XLAT | 2.82043E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 8.87276E-02 | | | | |
| TIM | 1.43000E-02 | WHT | 2.46603E-05 | VEL | 9.50273E-03 | RANG | 2.18838E-02 | GAM | -1.40956E-01 |
| ALT | 1.31858E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 8.93535E-00 |
| SOS | 1.06350E-03 | LIFT | 0 | DRAG | 1.00043E-03 | QATM | 3.41415E-02 | HPO | 7.56164E-06 |
| GR | 4.05642E-01 | ZDOT | 0 | ZR | 2.78690E-02 | XLON | 7.73757E-01 | XLAT | 2.82021E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 9.87942E-02 | | | | |
| TIM | 1.44000E-02 | WHT | 2.46603E-05 | VEL | 9.49522E-03 | RANG | 2.20344E-02 | GAM | -1.42576E-01 |
| ALT | 1.29532E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 8.96494E-00 |
| SOS | 1.05922E-03 | LIFT | 0 | DRAG | 1.10400E-03 | QATM | 3.74752E-02 | HPO | 8.35642E-06 |
| GR | 4.47278E-01 | ZDOT | 0 | ZR | 2.78715E-02 | XLON | 7.73507E-01 | XLAT | 2.81999E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 1.10158E-01 | | | | |
| TIM | 1.45000E-02 | WHT | 2.46603E-05 | VEL | 9.48778E-03 | RANG | 2.21848E-02 | GAM | -1.44202E-01 |
| ALT | 1.27191E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 8.99404E-00 |
| SOS | 1.05487E-03 | LIFT | 0 | DRAG | 1.21818E-03 | QATM | 4.16414E-02 | HPO | 9.25219E-06 |
| GR | 4.93983E-01 | ZDOT | 0 | ZR | 2.78740E-02 | XLON | 7.73258E-01 | XLAT | 2.81977E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 1.2347E-01 | | | | |
| TIM | 1.46000E-02 | WHT | 2.46603E-05 | VEL | 9.47772E-03 | RANG | 2.23350E-02 | GAM | -1.45827E-01 |
| ALT | 1.24805E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.02249E-00 |
| SOS | 1.05047E-03 | LIFT | 0 | DRAG | 1.34794E-03 | QATM | 4.60984E-02 | HPO | 1.02636E-05 |
| GR | 5.44441E-01 | ZDOT | 0 | ZR | 2.78756E-02 | XLON | 7.73006E-01 | XLAT | 2.81956E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 1.3751E-01 | | | | |
| TIM | 1.47000E-02 | WHT | 2.46603E-05 | VEL | 9.46645E-03 | RANG | 2.24850E-02 | GAM | -1.47454E-01 |
| ALT | 1.22490E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.05009E-00 |
| SOS | 1.04600E-03 | LIFT | 0 | DRAG | 1.49311E-03 | QATM | 5.11127E-02 | HPO | 1.14076E-05 |
| GR | 6.05430E-01 | ZDOT | 0 | ZR | 2.78791E-02 | XLON | 7.72760E-01 | XLAT | 2.81934E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 1.54096E-01 | | | | |
| TIM | 1.48000E-02 | WHT | 2.46603E-05 | VEL | 9.45256E-03 | RANG | 2.26346E-02 | GAM | -1.49083E-01 |
| ALT | 1.19988E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.07663E-00 |
| SOS | 1.04146E-03 | LIFT | 0 | DRAG | 1.6547E-03 | QATM | 5.67599E-02 | HPO | 1.27039E-05 |
| GR | 6.71836E-01 | ZDOT | 0 | ZR | 2.78816E-02 | XLON | 7.72511E-01 | XLAT | 2.81912E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 1.72445E-01 | | | | |
| TIM | 1.49000E-02 | WHT | 2.46603E-05 | VEL | 9.43747E-03 | RANG | 2.27839E-02 | GAM | -1.50715E-01 |
| ALT | 1.17545E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.10184E-00 |
| SOS | 1.03684E-03 | LIFT | 0 | DRAG | 1.84131E-03 | QATM | 6.31260E-02 | HPO | 1.41754E-05 |
| GR | 7.46670E-01 | ZDOT | 0 | ZR | 2.78842E-02 | XLON | 7.72264E-01 | XLAT | 2.81890E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 1.94152E-01 | | | | |
| TIM | 1.50000E-02 | WHT | 2.46603E-05 | VEL | 9.41911E-03 | RANG | 2.29329E-02 | GAM | -1.52350E-01 |
| ALT | 1.15080E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.12543E-00 |
| SOS | 1.03220E-03 | LIFT | 0 | DRAG | 2.04946E-03 | QATM | 7.03084E-02 | HPO | 1.56489E-05 |
| GR | 8.31078E-01 | ZDOT | 0 | ZR | 2.78867E-02 | XLON | 7.72017E-01 | XLAT | 2.81869E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 2.18390E-01 | | | | |
| TIM | 1.51000E-02 | WHT | 2.46603E-05 | VEL | 9.39845E-03 | RANG | 2.30814E-02 | GAM | -1.53989E-01 |
| ALT | 1.12759E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.14706E-00 |
| SOS | 1.02744E-03 | LIFT | 0 | DRAG | 2.28442E-03 | QATM | 7.84174E-02 | HPO | 1.75544E-05 |
| GR | 9.26357E-01 | ZDOT | 0 | ZR | 2.78892E-02 | XLON | 7.71770E-01 | XLAT | 2.81847E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 2.45985E-01 | | | | |
| TIM | 1.52000E-02 | WHT | 2.46603E-05 | VEL | 9.37442E-03 | RANG | 2.32295E-02 | GAM | -1.55633E-01 |
| ALT | 1.10089E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.16833E-00 |
| SOS | 1.02270E-03 | LIFT | 0 | DRAG | 2.5491E-03 | QATM | 8.75776E-02 | HPO | 1.99311E-05 |
| GR | 1.03398E-01 | ZDOT | 0 | ZR | 2.78916E-02 | XLON | 7.71524E-01 | XLAT | 2.81826E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 2.77418E-01 | | | | |
| TIM | 1.53000E-02 | WHT | 2.46603E-05 | VEL | 9.34679E-03 | RANG | 2.33771E-02 | GAM | -1.57282E-01 |
| ALT | 1.07555E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.18286E-00 |
| SOS | 1.01786E-03 | LIFT | 0 | DRAG | 2.84970E-03 | QATM | 9.79263E-02 | HPO | 2.24184E-05 |
| GR | 1.15558E-01 | ZDOT | 0 | ZR | 2.78941E-02 | XLON | 7.71280E-01 | XLAT | 2.81804E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 3.13247E-01 | | | | |
| TIM | 1.54000E-02 | WHT | 2.46603E-05 | VEL | 9.31508E-03 | RANG | 2.35241E-02 | GAM | -1.58936E-01 |
| ALT | 1.05022E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.19593E-00 |
| SOS | 1.01296E-03 | LIFT | 0 | DRAG | 3.18862E-03 | QATM | 1.09620E-01 | HPO | 2.52666E-05 |
| GR | 1.29382E-01 | ZDOT | 0 | ZR | 2.78966E-02 | XLON | 7.71036E-01 | XLAT | 2.81783E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 3.54096E-01 | | | | |
| TIM | 1.55000E-02 | WHT | 2.46603E-05 | VEL | 9.27870E-03 | RANG | 2.36702E-02 | GAM | -1.60599E-01 |
| ALT | 1.02745E-05 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.20514E-00 |
| SOS | 1.00800E-03 | LIFT | 0 | DRAG | 3.57163E-03 | QATM | 1.22830E-01 | HPO | 2.85335E-05 |
| GR | 1.44833E-01 | ZDOT | 0 | ZR | 2.78990E-02 | XLON | 7.70793E-01 | XLAT | 2.81762E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 4.00469E-01 | | | | |
| TIM | 1.56000E-02 | WHT | 2.46603E-05 | VEL | 9.23722E-03 | RANG | 2.38161E-02 | GAM | -1.62269E-01 |
| ALT | 9.98889E-04 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.20974E-00 |
| SOS | 1.00298E-03 | LIFT | 0 | DRAG | 4.00490E-03 | QATM | 1.37743E-01 | HPO | 3.22861E-05 |
| GR | 1.67378E-01 | ZDOT | 0 | ZR | 2.79015E-02 | XLON | 7.70551E-01 | XLAT | 2.81741E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 4.53742E-01 | | | | |
| TIM | 1.57000E-02 | WHT | 2.46603E-05 | VEL | 9.18976E-03 | RANG | 2.39610E-02 | GAM | -1.63949E-01 |
| ALT | 9.73012E-04 | PHI | 4.50000E-01 | Z | 9.50001E-01 | ALPH | 0 | MACH | 9.20895E-00 |
| SOS | 9.97916E-04 | LIFT | 0 | DRAG | 4.49263E-03 | QATM | 1.54559E-01 | HPO | 3.66030E-05 |
| GR | 1.89181E-01 | ZDOT | 0 | ZR | 2.79039E-02 | XLON | 7.70311E-01 | XLAT | 2.81720E-01 |
| GAMC | -9.70000E-00 | THR | 0 | GV | 5.14215E-01 | | | | |

| | | | | | | | | | |
|------|--------------|------|-------------|------|-------------|------|-------------|------|-----------|
| TIM | 1.58000E 02 | WHT | 2.46603E 05 | VEL | 9.13562E 03 | RANG | 2.41049E 02 | GAM | -1.65640E |
| ALT | 9.47019E 04 | PHI | 4.50000E 01 | Z | 9.50001E 01 | ALPH | 0 | MACH | 9.20189E |
| SOS | 9.92799E 02 | LIFT | 0 | DRAG | 5.04311E 05 | QATM | 1.73494E 03 | RPO | 4.15756E |
| GR | 2.04503E 00 | ZDOT | 0 | ZB | 2.79063E 02 | XLON | 7.78072E 01 | XLAT | 2.81699E |
| GAMC | -9.70000E 00 | THR | 0 | GV | 5.83010E-01 | | | | |
| TIM | 1.59000E 02 | WHT | 2.46603E 05 | VEL | 9.07396E 03 | RANG | 2.42479E 02 | GAM | -1.67344E |
| ALT | 9.20931E 04 | PHI | 4.50000E 01 | Z | 9.50001E 01 | ALPH | 0 | MACH | 9.18756E |
| SOS | 9.87635E 02 | LIFT | 0 | DRAG | 5.66252E 05 | QATM | 1.94767E 03 | RPO | 4.73099E |
| GR | 2.29621E 00 | ZDOT | 0 | ZB | 2.79087E 02 | XLON | 7.69835E 01 | XLAT | 2.81678E |
| GAMC | -9.70000E 00 | THR | 0 | GV | 6.61160E-01 | | | | |
| TIM | 1.60000E 02 | WHT | 2.46603E 05 | VEL | 9.00381E 03 | RANG | 2.43897E 02 | GAM | -1.69063E |
| ALT | 8.94773E 04 | PHI | 4.50000E 01 | Z | 9.50001E 01 | ALPH | 0 | MACH | 9.16485E |
| SOS | 9.82429E 02 | LIFT | 0 | DRAG | 6.35777E 05 | QATM | 2.18598E 03 | RPO | 5.39293E |
| GR | 2.57814E 00 | ZDOT | 0 | ZB | 2.79110E 02 | XLON | 7.69599E 01 | XLAT | 2.81657E |
| GAMC | -9.70000E 00 | THR | 0 | GV | 7.49741E-01 | | | | |
| TIM | 1.61000E 02 | WHT | 2.46603E 05 | VEL | 8.92415E 03 | RANG | 2.45302E 02 | GAM | -1.70799E |
| ALT | 8.68573E 04 | PHI | 4.50000E 01 | Z | 9.50001E 01 | ALPH | 0 | MACH | 9.13251E |
| SOS | 9.77185E 02 | LIFT | 0 | DRAG | 7.13563E 05 | QATM | 2.45198E 03 | RPO | 6.15761E |
| GR | 2.89357E 00 | ZDOT | 0 | ZB | 2.79134E 02 | XLON | 7.69366E 01 | XLAT | 2.81637E |
| GAMC | -9.70000E 00 | THR | 0 | GV | 8.49854E-01 | | | | |
| TIM | 1.62000E 02 | WHT | 2.46603E 05 | VEL | 8.83387E 03 | RANG | 2.46692E 02 | GAM | -1.72555E |
| ALT | 8.42363E 04 | PHI | 4.50000E 01 | Z | 9.50001E 01 | ALPH | 0 | MACH | 9.08919E |
| SOS | 9.71909E 02 | LIFT | 0 | DRAG | 8.00233E 05 | QATM | 2.74747E 03 | RPO | 7.04143E |
| GR | 3.24503E 00 | ZDOT | 0 | ZB | 2.79157E 02 | XLON | 7.69136E 01 | XLAT | 2.81617E |
| GAMC | -9.70000E 00 | THR | 0 | GV | 9.62560E-01 | | | | |
| TIM | 1.63000E 02 | WHT | 2.46603E 05 | VEL | 8.73181E 03 | RANG | 2.48067E 02 | GAM | -1.74333E |
| ALT | 8.16178E 04 | PHI | 4.50000E 01 | Z | 9.50001E 01 | ALPH | 0 | MACH | 9.01967E |
| SOS | 9.68086E 02 | LIFT | 0 | DRAG | 8.93590E 05 | QATM | 3.04452E 03 | RPO | 8.03866E |
| GR | 3.62360E 00 | ZDOT | 0 | ZB | 2.79180E 02 | XLON | 7.68908E 01 | XLAT | 2.81597E |
| GAMC | -9.70000E 00 | THR | 0 | GV | 1.08562E 00 | | | | |
| TIM | 1.64000E 02 | WHT | 2.46603E 05 | VEL | 8.61768E 03 | RANG | 2.49423E 02 | GAM | -1.76139E |
| ALT | 7.90056E 04 | PHI | 4.50000E 01 | Z | 9.50001E 01 | ALPH | 0 | MACH | 8.90177E |
| SOS | 9.68086E 02 | LIFT | 0 | DRAG | 9.87659E 05 | QATM | 3.38097E 03 | RPO | 9.10524E |
| GR | 4.00506E 00 | ZDOT | 0 | ZB | 2.79202E 02 | XLON | 7.68683E 01 | XLAT | 2.81577E |
| GAMC | -9.70000E 00 | THR | 0 | GV | 1.21193E 00 | | | | |

.....GR MAX CONTROL.....

6-61

GH 1.46403E 00 ZUCT 0 ZR 2.85276E 02 XLON 7.68467E 01 XLAI 2.76770E 01
 GAMC -6.00111E 00 THW 0 GV 1.16710E 00

TIME REACHED

MACH CONTROL

TIM 2.60000E 02 WMT 2.46426E 05 VFL 7.224 2E 02 HANG 3.08839E 02 GAM -4.13194E 00
 ALT 4.24628E 04 PHI 0 7 2.84949E 02 ALPH 7.42980E 00 MACH 7.46744E -01
 SOS 9.68086E 02 LIFT 2.44122E 05 DRAG 9.861 7E 04 QAIM 1.36391E 02 HFO 5.21969E -04
 GR 1.03986E 00 ZUCT 0 ZR 2.85276E 02 XLON 7.60004E 01 XLAI 2.76647E 01
 GAMC -4.13208E 00 THW 3.92480E 04 GV 1.02617E 00

TIM 2.80000E 02 WMT 2.44983E 05 VFL 7.74644E 02 HANG 3.11312E 02 GAM -3.07129E 00
 ALT 4.15293E 04 PHI 0 7 2.84949E 02 ALPH 5.91769E 00 MACH 8.00233E -01
 SOS 9.68086E 02 LIFT 2.37612E 05 DRAG 1.157 2E 05 QAIM 1.64788E 02 HFO 5.45823E -04
 GR 1.01719E 00 ZUCT 0 ZR 2.85276E 02 XLON 7.59398E 01 XLAI 2.76484E 01
 GAMC -3.07213E 00 THW 1.11979E 05 GV 1.01656E 00

TIM 3.00000E 02 WMT 2.43539E 05 VFL 7.82576E 02 HANG 3.14874E 02 GAM -2.18235E 00
 ALT 4.08266E 04 PHI 0 7 2.84949E 02 ALPH 5.54309E 00 MACH 8.00385E -01
 SOS 9.68086E 02 LIFT 2.35330E 05 DRAG 1.217 3E 05 QAIM 1.77860E 02 HFO 5.64496E -04
 GR 1.01142E 00 ZUCT 0 ZR 2.85276E 02 XLON 7.58984E 01 XLAI 2.76374E 01
 GAMC -2.18235E 00 THW 1.11979E 05 GV 1.01142E 00

TIM 3.20000E 02 WMT 2.42096E 05 VFL 7.78279E 02 HANG 3.16437E 02 GAM -1.57578E 00
 ALT 4.03191E 04 PHI 0 7 2.84949E 02 ALPH 5.44566E 00 MACH 8.00457E -01
 SOS 9.68086E 02 LIFT 2.32896E 05 DRAG 1.20366E 05 QAIM 1.75177E 02 HFO 5.75822E -04
 GR 1.00623E 00 ZUCT 0 ZR 2.85276E 02 XLON 7.58572E 01 XLAI 2.76264E 01
 GAMC -1.57578E 00 THW 1.11979E 05 GV 1.006 0E 00

TIM 3.40000E 02 WMT 2.40652E 05 VFL 7.72612E 02 HANG 3.18984E 02 GAM -1.18850E 00
 ALT 3.99547E 04 PHI 0 7 2.84949E 02 ALPH 5.35524E 00 MACH 7.98083E -01
 SOS 9.68086E 02 LIFT 2.31114E 05 DRAG 1.183 4E 05 QAIM 1.75664E 02 HFO 5.88559E -04
 GR 1.00419E 00 ZUCT 0 ZR 2.85276E 02 XLON 7.58162E 01 XLAI 2.76155E 01
 GAMC -1.18850E 00 THW 1.11979E 05 GV 1.00416E 00

TIM 3.60000E 02 WMT 2.39209E 05 VFL 7.68002E 02 HANG 3.21514E 02 GAM -8.77156E -01
 ALT 3.96925E 04 PHI 0 7 2.84949E 02 ALPH 5.30945E 00 MACH 7.93320E -01
 SOS 9.68086E 02 LIFT 2.29073E 05 DRAG 1.164 5E 05 QAIM 1.75767E 02 HFO 5.95994E -04
 GR 1.00116E 00 ZUCT 0 ZR 2.85276E 02 XLON 7.57755E 01 XLAI 2.76046E 01
 GAMC -8.77157E -01 THW 1.11979E 05 GV 1.001 4E 00

TIM 3.80000E 02 WMT 2.37766E 05 VFL 7.64722E 02 HANG 3.24031E 02 GAM -6.00869E -01
 ALT 3.95032E 04 PHI 0 7 2.84949E 02 ALPH 5.27257E 00 MACH 7.89891E -01
 SOS 9.68086E 02 LIFT 2.27434E 05 DRAG 1.150 2E 05 QAIM 1.75837E 02 HFO 6.01422E -04
 GR 9.99938E -01 ZUCT 0 ZR 2.85276E 02 XLON 7.57350E 01 XLAI 2.75938E 01
 GAMC -6.00982E -01 THW 1.11979E 05 GV 9.999 9E -01

TIM 4.00000E 02 WMT 2.36322E 05 VFL 7.62277E 02 HANG 3.26540E 02 GAM -4.99076E -01
 ALT 3.93625E 04 PHI 0 7 2.84949E 02 ALPH 5.21480E 00 MACH 7.86830E -01
 SOS 9.68086E 02 LIFT 2.25232E 05 DRAG 1.140 7E 05 QAIM 1.76104E 02 HFO 6.05489E -04
 GR 9.96196E -01 ZUCT 0 ZR 2.85276E 02 XLON 7.56946E 01 XLAI 2.75830E 01
 GAMC -5.00000E -01 THW 1.11979E 05 GV 9.96194E -01

TIM 4.20000E 02 WMT 2.34879E 05 VFL 7.619 2E 02 HANG 3.29044E 02 GAM -4.99227E -01
 ALT 3.92295E 04 PHI 0 7 2.84949E 02 ALPH 5.16022E 00 MACH 7.84891E -01
 SOS 9.68086E 02 LIFT 2.23891E 05 DRAG 1.137 3E 05 QAIM 1.76896E 02 HFO 6.09356E -04
 GR 9.96146E -01 ZUCT 0 ZR 2.85276E 02 XLON 7.56543E 01 XLAI 2.75722E 01
 GAMC -5.00000E -01 THW 1.11979E 05 GV 9.961 5E -01

TIM 4.40000E 02 WMT 2.33435E 05 VFL 7.61571E 02 HANG 3.31547E 02 GAM -4.99225E -01

ALT 3.90966E 04 PHI 0 7 2.84949E 02 ALPH 5.11074E 00 MACH 7.86688E -01
 SOS 9.68086E 02 LIFT 2.22573E 05 DRAG 1.137 6E 05 QAIM 1.77843E 02 HFO 6.13245E -04
 GR 9.96169E -01 ZUCT 0 ZR 2.85276E 02 XLON 7.56140E 01 XLAI 2.75615E 01
 GAMC -5.00000E -01 THW 1.11979E 05 GV 9.96169E -01

ALTB AND YMR BOTH REACHED

TIM 4.56000E 02 WMT 2.32281E 05 VFL 7.613 6E 02 HANG 3.33548E 02 GAM -4.99235E -01
 ALT 3.89904E 04 PHI 0 7 2.84949E 02 ALPH 5.05444E 00 MACH 7.86424E -01
 SOS 9.68086E 02 LIFT 2.21517E 05 DRAG 1.137 4E 05 QAIM 1.78630E 02 HFO 6.16373E -04
 GR 9.96178E -01 ZUCT 0 ZR 2.85276E 02 XLON 7.55818E 01 XLAI 2.75529E 01
 GAMC 0 THW 1.11979E 05 GV 9.961 8E -01

HREQUT

TIM 2.71011E 03 WMT 2.14095E 05 VFL 7.613 6E 02 HANG 6.15985E 02 GAM -4.99235E -01
 ALT 3.89904E 04 PHI 0 7 2.84949E 02 ALPH 4.25000E 00 MACH 7.86424E -01
 SOS 9.68086E 02 LIFT 4.33273E 05 DRAG 1.816 9E 05 QAIM 1.78630E 02 HFO 6.16373E -04
 GR 9.96178E -01 ZUCT 0 ZR 2.85276E 02 XLON 7.55818E 01 XLAI 2.75529E 01

GLIDE

WMT 2.15000E 05 HANG 6.31295E 02 GAM 2.27347E 01
 ALT 3.89904E 04 PHI 0 7 2.84949E 02 ALPH 1.00000E 01
 SOS 9.68086E 02 LIFT 4.25167E 05 DRAG 1.794 4E 05 QAIM 1.78630E 02 HFO 6.16373E -04
 GR 9.96178E -01 ZUCT 0 ZR 2.85276E 02 XLON 7.55818E 01 XLAI 2.75529E 01

CALCULATIONS FINISHED

1